

# Manufacturers Record

Industry Construction

Reg. U. S. Pat. Office



BALTIMORE, MD.

APRIL 21, 1932

## Shorter Working Hours

Myron C. Taylor, chairman of the United States Steel Corporation, said in a recent speech before the Boston Chamber of Commerce:

"Controlled production may be expected to come about automatically, as our surplus stocks become exhausted and as competition, spurred by necessity, discards obsolescent production equipment and adopts a justifiable price control that sacrifices some part of production volume to secure reasonable price levels for commodities.

"This also will bring about a redistribution of work and readjustment of living conditions throughout the country, which in industry will mean a reduced working period and a consequent greater leisure for the individual."

The most serious question to which America has to address itself at the present time is how to find work for the idle. And unfortunately it presses for an answer at a time when industrial capacity is larger than our present needs. It is the opinion of many that work will have to be divided among those now employed and those unemployed, or as Mr. Taylor states, "a redistribution of work with a readjustment of living conditions" and a reduction of the week's working hours. Perhaps for some time to come it may mean a 4-day week or less, but based on the present needs of the country the solution evidently must be found in spreading work among a larger number of people. That does not mean necessarily a permanent adjustment, because with the strides that are being made by science and invention, unquestionably new sources of wealth will be developed and the demand will grow in time, as it always has, for workers in new fields.

We expect to see the back-to-the-farm movement grow, as it has grown in the last year and is growing more and more. These new farmers, leaving the industrial group, now join with the group which consumes manufactured goods. It indicates a population trend that may have a decided bearing on future markets and demand.

This country has been discovering in the last two years facts about its affairs that should prove of lasting benefit. Where a man and a machine can produce today twice the quantity of goods in less time than was before possible, the working period must be shortened or new markets secured to take care of the surplus production.

It should be borne in mind that our surplus stock, however, is being steadily exhausted, and as Mr. Taylor says, controlled production may be expected to come about automatically, not only because of this reduction of surplus stock, but because of competition. Recognition of these facts will clear away some of the clouds of uncertainty and doubt.



WE have hundreds of Power Submarine Cable installations—some, up to nine miles in length. These cables cover designs for a variety of conditions and voltages, and have an enviable record for satisfactory service over a long period of years.

**American**  
QUALITY  
Steel & Wire Company  
**SUBMARINE  
CABLES**

## In Use Throughout the World

Because the American Steel & Wire Company is a dependable source of supply—because of unequalled manufacturing facilities which permit better and more economical production—because of an engineering staff recognized for outstanding accomplishments—the electrical wires and cables it produces are recognized as standard and are in use throughout the world.

We make cables of any size or type and for any voltage, to meet the most rigid specifications.

1831



1932

## AMERICAN STEEL & WIRE COMPANY

208 South LaSalle Street, Chicago

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

And All Principal Cities

Pacific Coast Distributors: Columbia Steel Company, Russ Building, San Francisco

Export Distributors: United States Steel Products Company, New York



# THE FIRST AND ONLY

# 3/4 YARD SHOVEL

## WITH ALL THESE ADVANTAGES!

An Independent Crowd that gives you 50% increased digging effectiveness of the engine because there is only 15% loss of digging force while thrusting instead of the usual 45% loss present on other types of independent crowd shovels.

Full clutch and brake equipment is furnished for converting to crane, dragline or pullshovel.

A complete inclosure that protects the operator from bad weather is standard equipment.

More than ever the "feather-touch" clutch control speeds operation by relieving the operator of the work of shifting heavier clutches. The "feather-touch" clutch control retains the "feel" of the load and does not drag on the drum.

Ball and roller bearings introduced to the shovel industry by Northwest are used on all high speed shafts in accordance with good engineering practice.

Powerful, slow speed, heavy duty engine.

Ball and roller bearings introduced to the shovel industry by Northwest are used on all high speed shafts in accordance with good engineering practice.

Can be loaded on a standard flat car under its own power without dismantling.

For the first time you can have a shovel in the large capacity class that gives you the unequalled mobility that comes with positive traction on both crawlers while turning as well as while going straight ahead.

### BRANCH OFFICES:

Atlanta, Ga.: 351 Whitehall St.  
Memphis, Tenn.: Second at Butler  
Dallas, Tex.: 1221 S. Lamar St.  
St. Louis, Mo.: 1325 Macklind Ave.

**NORTHWEST  
SHOVEL-  
AMERICA'S  
LEADING  
ROAD BUILDER**

Never before have these features been incorporated in a shovel of this capacity!

Here are exclusive advantages that add speed to operation and forecast a potential output equal to that of much larger and costlier machines.

### NORTHWEST ENGINEERING COMPANY

*The world's largest exclusive builders of gasoline, oil burning and electric powered shovels, cranes and draglines*

1733 Steger Bldg. 28 E. Jackson Blvd,  
Chicago, Ill., U. S. A.

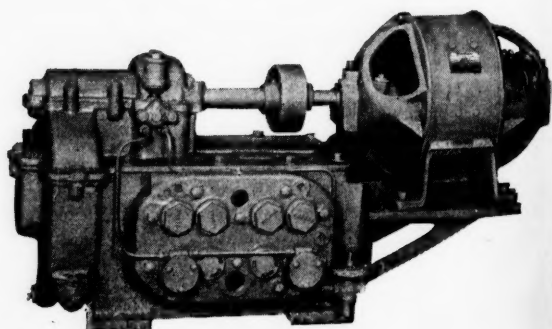
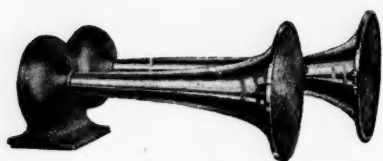
MR4-21Gray

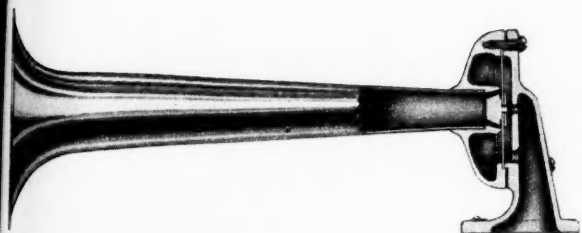
# NORTHWEST



## *Here mill activity responds* to **TRUMPET CALLS**

**T**HROUGH the roar and clatter of the mill a powerful signal penetrates—It is unmistakably clear and commanding, though not harsh or shrill. A “Pneuphonic” horn has spoken—An ingot rises from the soaking pit and scurries to the blooming mill . . . Then another horn is heard, entirely different in tone, but still smooth and distinct—A giant motor whirs and powerful rolls are at work on the ingot—Down the line it flashes through roughing and finishing stands, tables rumbling, rolls crunching, saws z-z-zipping . . . Suddenly a horn sounds again, still different in tone—Another “Pneuphonic” has spoken—The mill stops, men rush to clear an obstruction, adjust the rolls, or make a quick repair . . . And so it goes throughout the day—A high pitched staccato, a deep-toned sustained blast, a harmonious reverberating chime, each in turn serving to direct the several operations of the mill—a distinct tone for each one, no uncertainty of sound, no confusion of orders, for here in this mid-western steel plant is a unique signal system employing a variety of Westinghouse air operated “Pneuphonic” Horns.





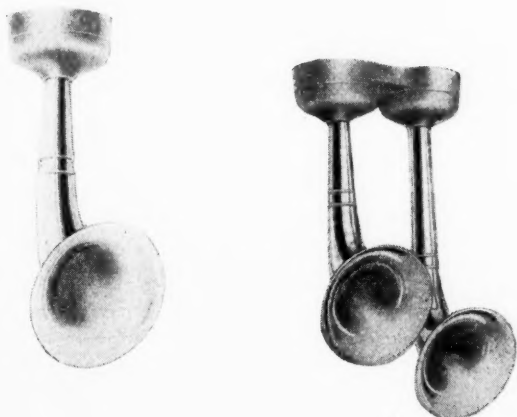
The "Pneu-phon-ic" Horn has proved to be a superior type of signal in this mid-western steel plant (where about 70 are now in use) for the following reasons: It is audible for great distances amid the roar and clatter of the mill . . . The several types and sizes permit a great variety of signals without possibility of confusion . . . It is positive in action, and blasts may be made in quick succession . . . Electric control permits a horn to be operated from several different points . . . Very little air is required for its operation . . . Simple construction assures reliable operation and low maintenance—any unskilled labor can easily clean the horn when necessary, and re-assemble it without difficulty.

Air for operating each group of horns at various locations throughout the plant—for example, 19 at the beam mill—is supplied independently by a pair of Westinghouse Type NW5-10 automatically controlled air compressors. This is one of the many types and sizes of Westinghouse compressors widely used in steel mills for a great variety of purposes—All noted for their reliable, economic, and enduring service.

## WESTINGHOUSE

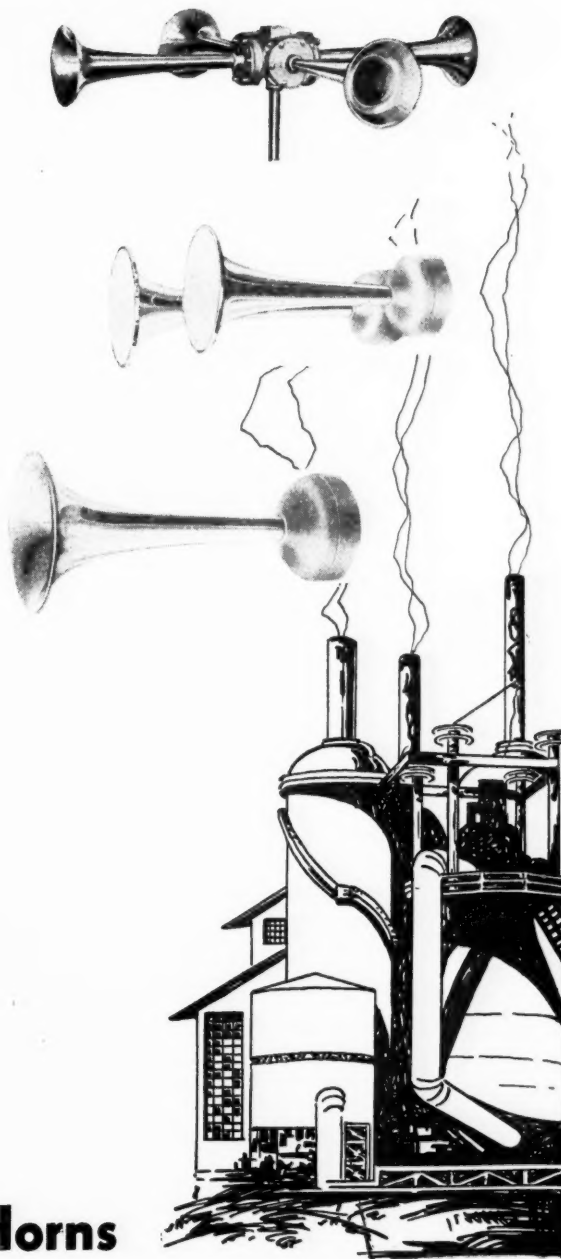
Traction Brake Company

Industrial Division, Pittsburgh, Pa.



The "Pneu-phon-ic" Horn is simple in design, consisting of a bronze bell, and a counter-balanced metal diaphragm enclosed in a sturdy housing and normally seated against a sound tube . . . Air entering the housing unseats the diaphragm momentarily until the sharp drop in pressure produced by air passing into the bell causes it to reseat. This action, quickly repeated, imparts a rapid vibration to the diaphragm which creates air waves that are greatly amplified by resonance in the bell, producing a pleasing sound of tremendous carrying power (with very low air consumption). The counter-balanced diaphragm—an exclusive feature of "Pneu-phon-ic" Horns—insures positive and reliable action . . . Horns may be operated directly by means of a whistle valve and signal cord, or be remotely-controlled by a magnet valve and push button switch.

(9098)



# Westinghouse Pneu-phon-ic Horns



# DIRECTORY

ARCHITECTS

ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

**Smallman-MacQueen  
Construction Co., Inc.**  
Engineers and Contractors  
BIRMINGHAM, ALA.

**J. B. Converse & Co., Inc.**  
Engineers  
Industrial Investigations, reports,  
plans, estimates, supervision.  
MOBILE, ALA.

**Algernon Blair**  
Contractor  
MONTGOMERY, ALA.

**The John W. Cowper Co., Inc.**  
General Contractors  
843-851 National Press Bldg.,  
WASHINGTON, D. C.

**Milburn, Heister & Co.**  
Architects  
WASHINGTON, D. C.

**Wm. J. J. Chase, A. I. A.**  
Architect  
Public and Commercial Buildings  
140 Peachtree St. ATLANTA, GA.

**Hornbuckle Contracting Co.**  
INCORPORATED  
Municipal Improvements  
Industrial Village Utilities  
ATLANTA, GA.

**G. Lloyd Preacher & Co., Inc.**  
Architects and Engineers  
501 Mortgage Guarantee Bldg.  
ATLANTA, GA.

**Gardner & Howe**  
Structural Engineers  
Steel and Reinforced Concrete Buildings,  
Bridges and Viaducts  
Porter Building MEMPHIS, TENN.

**Shore-Line Builders**  
INCORPORATED  
Carl Weber, Civil Engineer, President  
Seawalls—Bulkheads—Revetments  
"WEBER SYSTEM"  
JACKSONVILLE, FLORIDA.

**Hardaway Contracting Company**  
Engineers Contractors  
Water Power Developments, Bridges  
COLUMBUS, GEORGIA

**Tilghman Moyer Company**  
Bank Architects and Builders  
ALLENTOWN PENNSYLVANIA

**Walker Electrical Company**  
Electrical Contractors  
General Offices: ATLANTA, GA.  
Sales Offices:  
ATLANTA, GA. COLUMBUS, GA.  
GREENSBORO, N. C.

**Wiedeman and Singleton, Inc.**  
(Successors to Paul H. Norcross)  
Consulting Engineers  
WATER WORKS, SEWERS, SEWAGE  
DISPOSAL, APPRAISALS, VALUA-  
TIONS, REPORTS  
Candler Building ATLANTA, GA.

**Elroy G. Smith**  
Consulting and Designing  
Civil-Hydraulic Engineer  
Industrial Hydro-Electric Development  
a Specialty  
313-313-A Herald Bldg.,  
AUGUSTA, GA.

**W. S. Lee Engineering Corporation**  
Consulting Engineers  
Hydro-Electric Developments, Central  
Steam Stations, Industrial Building,  
Institutional Buildings.  
535 Fifth Avenue Power Building  
NEW YORK CHARLOTTE, N. C.

**S. E. Huey**  
Consulting Engineer  
Civil, Structural, Natural Gas  
Ouachita Bank Bldg., MONROE, LA.  
City Bank Bldg., SHREVEPORT, LA.

**J. V. & R. T. Burkes, Inc.**  
General Contractors  
MEMBER A. G. C. NEW ORLEANS

**The Warner Service Company**  
Electrical and Mechanical  
Contractors  
Cor. Clinch and Central Ave.  
KNOXVILLE, TENN.

**Van Rensselaer P. Saxe, C. E.**  
Welded Construction Structural Steel  
Concrete Construction  
217 N. Calvert St. BALTIMORE, MD.

**Earle N. Osborne**  
FLOORS  
Laid, Sanded and Finished  
ANYWHERE  
135 West Kirk Ave., Roanoke, Va.

**Chas. T. Main, Inc.**  
Industrial Engineers  
Mills, Warehouses, Complete Develop-  
ments.  
Electrical, Steam and Water Power  
Reports Appraisals  
201 Devonshire St. BOSTON, MASS.

**Consoer, Older & Quinlan, Inc.**  
Mems. A. S. C. E.  
Consulting Engineers  
Water Supply—Sewerage—Industrial  
Engineering  
317 N. 11th St. ST. LOUIS, MO.  
205 W. Wacker Drive, CHICAGO, ILL.

**Webb Electric Company**  
Electrical Contractors  
Industrial, Commercial and Institutional  
Electrical Installations.  
ANDERSON, S. C.

**Fiske-Carter Construction Co.**  
General Contractors  
GREENVILLE, S. C.  
SPARTANBURG, S. C.

**Poe Piping & Heating Co.**  
Contractors  
For Power Piping, Heating and  
Sprinkler Systems  
108 S. Main St. GREENVILLE, S. C.

**Steel & Lebby**  
JOHN A. STEEL, JR.  
THOS. D. LEBBY  
Engineers and Contractors  
The design and erection of concrete and  
steel structures.  
Holston Bank Building,  
KNOXVILLE, TENN.

## JOSEPH GODER

Consulting Engineer  
INCINERATORS

612 N. Michigan Ave. CHICAGO, ILLINOIS

## ROBERT W. HUNT COMPANY, ENGINEERS

Inspection—Tests—Consultation  
Tests of Materials and Supervision for Steel and Concrete Structures  
Cement, Chemical, Metallurgical, X-Ray and Physical Testing Laboratories  
General Offices and Laboratories  
22ND FLOOR INSURANCE EXCHANGE, CHICAGO  
Offices and Laboratories in All Large Cities

## J. E. Serrine & Company

Engineers

Factory Design: Hydro- and Steam-Electric Plants; Warehouses,  
Steam Utilization, Sewage Systems, Appraisals, Valuations, Reports  
General Offices: GREENVILLE, SOUTH CAROLINA

## Cornell-Young Company

INCORPORATED  
General Contractors

Railroads and Highways, Reinforced Concrete and Steam Shovel Work.  
704 Georgia Casualty Bldg. MACON, GEORGIA

## Bylesby Engineering & Management Corporation

Wholly-owned Subsidiary of  
Standard Gas and Electric Company

231 South LaSalle Street, Chicago  
NEW YORK PITTSBURGH SAN FRANCISCO

## The J. G. White Engineering Corporation

Engineers—Constructors

43 Exchange Place NEW YORK

**C. N. Harrub Engineering Co.**  
Member Am. Soc. C. E.  
Civil and Sanitary Engineers  
Water Supply, Sewerage, Paving and  
Structural Improvements  
705-9 Fourth & First Nat'l. Bk. Bldg.  
NASHVILLE, TENN.

**Engineering Service Corp.**  
Consulting Engineers  
Civil-Electrical-Mechanical-Refrigeration  
COLD and DRY STORAGE WAREHOUSE  
DESIGNS  
Reports—Appraisals—Designs—Surveys  
Docks and Harbor Designs—Ind. Engr.  
Water Sup.—Sewer Sys.—Oil and Gas Lines  
HOUSTON, TEXAS, U. S. A.

**Charles W. Alpaugh & Sons**  
Hydraulic and Construction Engineers  
Dams a Specialty: Investigations  
Estimates Free  
MANASSAS, VA.

**Charles Herbert Spring**  
QUANTITY SURVEYS  
835 Jefferson Standard Bldg.,  
GREENSBORO, N. C.

**The Picard Laboratories**  
Chemists and Inspecting Engineers  
Inspection of Cast Iron Pipe, Structural  
Steel, Cement, Railroad Equipment, etc.  
Chemical Analysis of all kinds.  
Representation in all Principal Cities  
Clark Building, BIRMINGHAM, ALA.

**Dow & Smith**  
A. W. Dow, Ph.B.; F. P. Smith, Ph.B.  
Mem. Am. Inst. Ch. Engrs.  
Mem. Am. Soc. Civ. Engrs.  
Chemical Engineers, Consulting Paving  
Engineers, Asphalts, Bitumens, Cement,  
Paving Materials  
131 East 23rd St. NEW YORK

# DIRECTORY

ARCHITECTS      ENGINEERS      CHEMISTS      GEOLOGISTS  
CHEMICAL ENGINEERS      ACCOUNTANTS      CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

## The J. B. McCrary Company

Engineers

ATLANTA

GEORGIA

MUNICIPAL IMPROVEMENTS

We design and construct Water-Works, Electric-Light and Sewer Systems—Paving and Road Work.

## W. S. BARSTOW & COMPANY

INCORPORATED

ENGINEERING — DESIGN — CONSTRUCTION  
INDUSTRIAL PLANTS — PUBLIC UTILITIES

*Consultation Invited on Building Projects*

120 Wall Street  
NEW YORK CITY

412 Washington Street  
READING, PENNA.

## Frederick Snare Corporation

Contracting Engineers

Difficult Foundations and Engineering Problems a Specialty

114 Liberty Street  
New York

PHILADELPHIA

HAVANA

## Lockwood Greene Engineers, Inc.

Plans—Specifications—Reports—  
Appraisals—for Industrial Plants

NEW YORK    BOSTON    CHICAGO    CLEVELAND    SPARTANBURG

## WILEY & WILSON

Consulting Engineers

STEAM AND ELECTRIC POWER PLANTS  
CENTRAL PLANT HEATING SYSTEMS  
Heating and Ventilating Equipments for Public and Private Buildings  
WATER SUPPLY, SEWERAGE AND SEWAGE DISPOSAL  
MAIN OFFICE: LYNCHBURG, VA.    BRANCH OFFICE: RICHMOND, VA.

## Kennedy-Riegger Drilling Co., Inc.

Engineers &amp; Contractors

Diamond Drill &amp; Wash Borings

30 Church Street

NEW YORK CITY

## Sprague & Henwood, Inc.

Diamond Core Drilling and Wash Borings

For Buildings, Bridges, Dams and all kinds of Minerals

"ANYWHERE"

Main Office

SCRANTON, PA.

## Mott Core Drilling Company

Diamond Core Drill Contractors

We Test Coal, Clays and Mineral Properties, Foundation Testing, Dams, Bridges, Buildings, Wash Borings, Dry Samples.

MAIN OFFICE

HUNTINGTON, W. VA.

Established 1881

## Froehling and Robertson, Inc.

Inspection Engineers and Chemists

Inspection of Cement, Steel, Pipe, Timber, Brick, Tile  
Design and Control of Asphalt and Concrete Mixture  
Water Analysis a Specialty.

RICHMOND

NEW YORK CITY

# Were you too late?

*Business opportunities are frequently lost for lack of dependable information. Modern industry demands the closest possible contact with a selected market. Advance news relative to proposed developments is invaluable.*

The Daily Construction Bulletin has been proven of outstanding worth in this respect. It is issued each business day covering accurately and completely engineering, manufacturing, financial and industrial undertakings of consequence in the South.

To enlarge your share of future contracts follow every day the

## Daily Construction Bulletin



## WE LOOK INTO THE EARTH

By use of Diamond Core Drills

We test foundations for buildings, bridges and dams. We prospect coal and mineral lands in any part of North and South America.

PENNSYLVANIA DRILLING CO.

1201-1215 Chartiers Avenue  
Pittsburgh (Elliott), Pa.  
DRILLING CONTRACTORS

## PERFORATED SCREEN PLATES AND SHEETS



ORES  
COAL  
STONE  
GRAVEL

for  
Cotton-Seed Oil Mills,  
Cotton Gins, Phosphate Mines,  
Fertilizer Plants, Cyanide  
Works, Chemical Works.

CEMENT  
SAND  
CLAY  
ETC.

Write for catalogue

CHARLES MUNDT & SONS

490 JOHNSTON AVENUE, JERSEY CITY, N. J.



No. 1



No. 3

## MANHATTAN PERFORATED METAL CO., INC.

43 17-37th Street, Long Island City, N. Y.

## PERFORATORS

of All Kinds of Metals for All Industries  
Write for Copper, Brass, Tin, Zinc or  
Aluminum Catalog



No. 7



No. 22

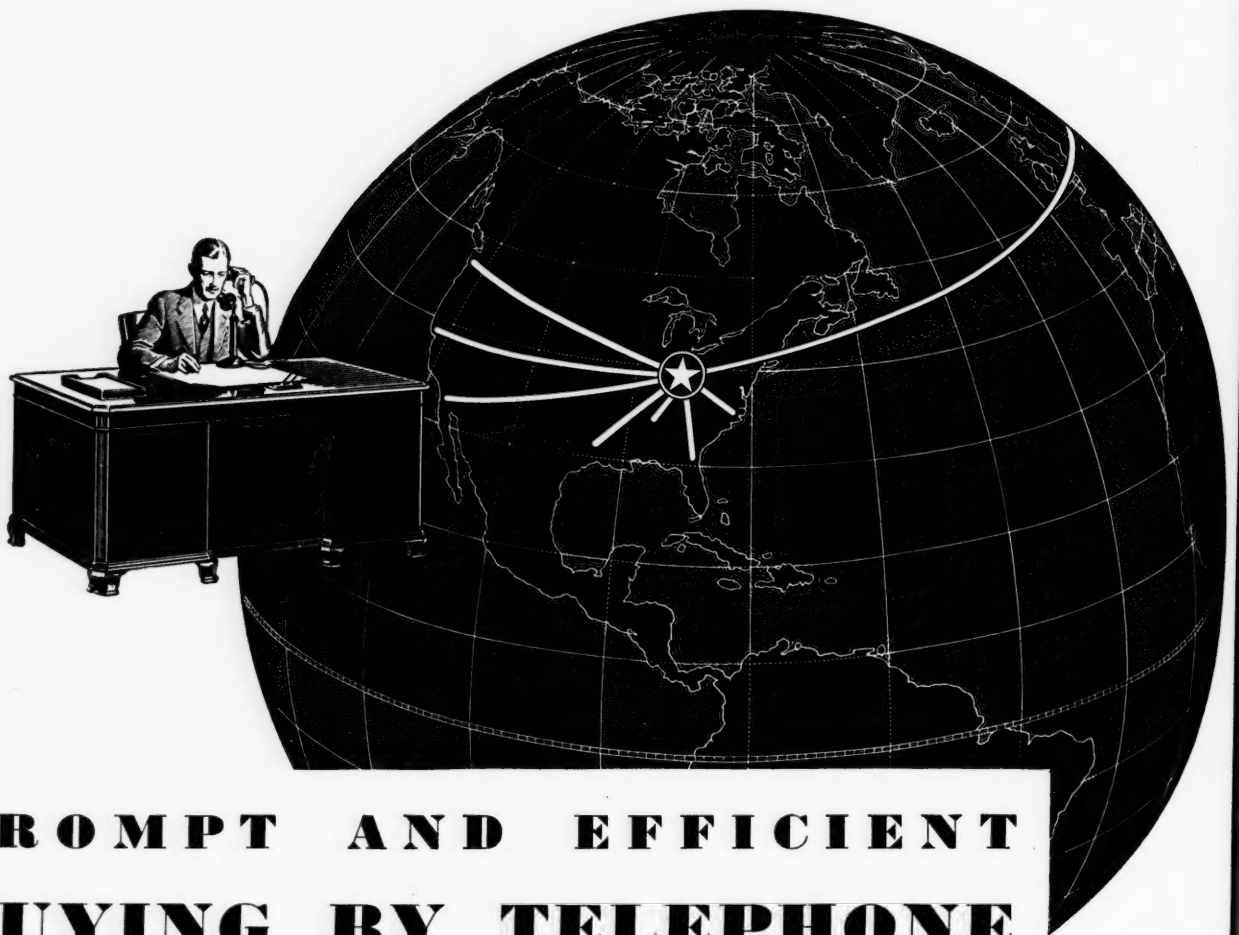
## PERFORATED METALS HEADQUARTERS

Cotton Seed Oil Works a Specialty

Send for Samples

ERDLE PERFORATING CO. Rochester, N. Y.

The vice-president in charge of purchases says: "*The way business is conducted today, I couldn't function without Long Distance.*"



## PROMPT AND EFFICIENT BUYING BY TELEPHONE

*brings important savings to this large company*

THE Procter and Gamble Company manufactures approximately 100 brands of soap, and numerous allied products. Raw materials—cottonseed oil, tallow, greases, palm oil, marine tallow, coconut oil, chemicals, equipment, supplies—are bought from brokers and agents in all parts of the world.

Constant telephone contact is maintained between the purchasing department in Cincinnati and these dealers. Officials state that prompt and efficient buying by telephone often means the satisfactory differential between profit and loss.

The vice-president in charge of purchases shops by telephone from San Francisco to New York, without leaving his desk! "I use Long Distance primarily because of the

instant service, and the satisfaction of consummating the trade itself quickly and efficiently," he says. Several times a year, he handles important transactions in England and Norway by Overseas Telephone Service.

Long Distance is the modern and economical way to conduct business between men in different cities. It is profitably used by companies of every size in sales, production, traffic, credit and other matters.

The Bell System has developed a Telephone Plan of Market Coverage to help its customers increase their business and cut costs. An experienced telephone representative will gladly help you custom-fit its features to the specific needs of your company.

**JUST CALL YOUR BELL TELEPHONE BUSINESS OFFICE**





# TABLE OF CONTENTS

Baltimore, Md., April 21, 1932

## EDITORIALS

Shorter Working Hours.....	Cover Page
Sales Tax .....	11
A Source of Wealth and Its Need of Protection.....	12
Government Printing Waste.....	13
Cotton Week .....	13
Appreciated Railroad Service.....	13
Financing Small Industries.....	13

## NEWS and FEATURE ARTICLES

Domestic Utilization of Fats and Oils....By Oren L. Whalin and Charles L. Stewart	14
Conditions in Kentucky Coal Field.....	16
Contract for \$350,000 Florida Residence.....	16
Naval Stores Situation.....By Henry Mace Payne	17
Ready-Mixed Concrete Plant in Atlanta.....	18
To Open Foundation Bids on \$3,000,000 Federal Building in St. Louis.....	18
3,000,000-Gallon Water System for Hattiesburg, Miss.....	19
Federal Building Completed at Salisbury, N. C.....	20
\$1,000,000 Waterway Project in South Carolina.....	20
Obsolescence Insurance Through Modernization.....By J. C. Knapp	21
Signs of Trade Improvement in the Southwest.....	21
Livestock Industry to Be Developed in Alabama.....	22
Constructive Work for the Unemployed.....	25

## SPECIAL DEPARTMENTS

### *Construction, New Industries and Contracts, Beginning on Page 30*

Iron, Steel and Metal Market.....	24	Industrial News .....	40
New and Improved Equipment.....	29	Trade Literature .....	41
Machinery, Proposals and Supplies Wanted..	39	Financial News .....	46

*Classified Index for Buyers.....* 54

*Alphabetical Index to Advertisers.....* 62

## MANUFACTURERS RECORD

Published Every Thursday  
by the

MANUFACTURERS RECORD  
PUBLISHING CO.  
FRANK GOULD, President

MAIN OFFICE  
Manufacturers Record Building,  
Commerce and Water Streets,  
Baltimore, Md.

BRANCH OFFICES  
Chicago—11 S. LaSalle St.  
New York—901 Singer Bldg.

Subscription Rates: \$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada add postage \$2.60 a year. For other foreign countries add postage \$3.50 a year. Single copies, 20c.; back numbers, one to six months, 50c. each; over six months, \$1.00.

PUBLISHERS DAILY CONSTRUCTION BULLETIN AND BLUE BOOK OF SOUTHERN PROGRESS

Member, A.B.C.

# LEADITE

Trade Mark Registered U.S. Pat. Office

**For Jointing Cast-Iron Water Mains**  
Saves at Least 75%

*Leadite Tested and Used for Over 30 Years*  
Leadite Joints Improve with Age

The Leadite Co., Girard Trust Company Bldg., Philadelphia, Pa.

## No Caulking

### THE CUTLER MAIL CHUTE

Is backed by—

An experience of fifty years.

A factory equipped and operated for our own work exclusively.

A force of experienced erectors in the field.

A determination to keep our product and service up to the highest possible standard.

Correspondence Invited.

**CUTLER MAIL CHUTE COMPANY**

GENERAL OFFICES AND FACTORY  
ROCHESTER, NEW YORK



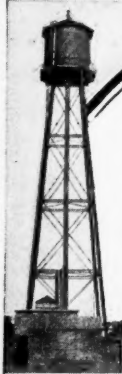
### Myers SELF-OILING Power Pumps

When a Myers Self-Oiling Power Pump is installed there is a satisfaction in knowing that the water supply will be uniform and that the operation and maintenance costs will be cut to the minimum. Twelve sizes, operation any power, meet most requirements in domestic, agricultural, commercial and industrial fields. No. PP-61 catalog mailed, if interested.

**The F. E. MYERS & BROS. CO.**

ASHLAND, OHIO

Ashland Pump and Hay Tool Works



### A Super Tower

Generosity typifies the design and construction of Caldwell Structural Towers. To provide the strength and sturdiness that have marked the unusual success of this type of tower for heavy loads and great heights we have spared no precaution in material or workmanship.

This tower is built of heavy structural shapes thoroughly laced and riveted together by the most modern scientific engineering methods. It is built for steel or wood tanks in capacities from 15,000 gallons upward.

Send for Catalog.

**W. E. Caldwell Co., Incorporated**  
1900 Brook Street,  
LOUISVILLE, KY.

*Caldwell*  
TANKS  
AND  
TOWERS

## Iron and Steel Products

**BETHLEHEM STEEL COMPANY**

General Offices: Bethlehem, Pa.

District Offices: New York,  
Boston, Philadelphia, Balti-  
more, Washington, Atlanta.



Pittsburgh, Buffalo, Cleveland,  
Cincinnati, Detroit, Chicago,  
St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco,  
Los Angeles, Portland, Seattle, Honolulu.

## BETHLEHEM

### Gulf States Creosoting Co.

PLANTS AT

HATTIESBURG, MISS., MERIDIAN, MISS., JACKSON, MISS.,  
SLIDELL, LA., BRUNSWICK, GA., BIRMINGHAM, ALA.

Main Office: HATTIESBURG, MISS.

### CREOSOTED MATERIAL

INCLUDING

Lumber, Timbers, Piles, Telephone and  
Telegraph Poles and Cross-Arms,  
Cross-Ties, Etc.

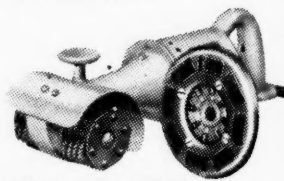
We also treat with Zinc Meta-Arsenite (colorless)

### GERDING BROTHERS

Mechanical Productionists

SPECIAL DEVICE  
BUILDERS

We Build Devices in  
Their Entirety. Either  
Singly or in Quantity.



TOOLS AND DIES—METAL STAMPING

Experimental Work—SPECIAL MANUFACTURING  
Inventions Made Practical for Low Cost Quantity  
Production.

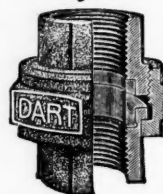
CINCINNATI - - OHIO

### THE QUALITY UNION

The Dart is the Quality Union, and  
quality is always cheapest.

The Dart is made of Malleable Iron,  
with extra heavy pipe ends and with  
double seated ball joint formed of  
bronze rings.

IN DART UNION THERE IS DOUBLE STRENGTH



**E. M. DART MFG. CO.**  
PROVIDENCE, R. I.

The Fairbanks Company, Sales Agent  
Dart Union Co., Ltd., Toronto, Canada.

# Manufacturers Record

Reg. U. S. Pat. Office

Devoted to the Upbuilding of the Nation Through the Development  
of the South and Southwest as the Nation's Greatest Material Asset

Vol. CI No. 16 }  
Weekly }

BALTIMORE, APRIL 21, 1932

{ Single Copies, 20 Cents.  
{ \$6.50 a Year

## Sales Tax

PEOPLE who are fighting the idea of a one per cent or two per cent sales tax are now paying a 15 per cent sales tax under another name, asserts Franklyn Hobbs, economist of the Central Republic Bank and Trust Company, Chicago. Mr. Hobbs believes that when the mass of the people come fully to understand that taxes take more than 15 cents out of every dollar of the nation's income from whatever source, the revulsion of feeling caused by such an enlightenment will help to put the sales tax, or a transaction tax or some similar tax into operation. All taxes are ultimately paid by the consumer. Real estate, corporation and business income taxes are all passed on in one way or another. As the rate is raised it results in higher rents, higher prices and higher operating costs.

After an intensive study of the tax question covering more than 10 years, this Chicago economist reaches the conclusion that the simplest and least burdensome tax which could be levied upon the people is a direct tax. He points out, as the most unfortunate phase of our present method of taxation, that when the tax is passed on as a part of the cost of doing business it carries with it a profit to the original taxpayer. By way of explanation—the manufacturer or merchant having paid an income tax equal to one per cent of his production or turnover adds the expense to his cost the following year. Lacking definite knowledge as to just what his tax will be he adds 2 per cent or more to cover possible taxes and frequently comes out at the end of the year with a profit on his tax payments, both his taxes and his profits on them being paid by the consumer.

Taxes should be equalized so that the lowest possible rate would be sufficient to produce the needed revenue for the Government. The prime consideration should be fair apportionment among the people, and economy in collection. The sales tax is the answer. The specious argument of the politician is that no sales tax should ever be placed upon the necessities

of life, and the poor should be protected from such burdensome taxes on their daily bread. "When these poor discover," says Mr. Hobbs, "that they are already paying a 15 per cent sales tax on everything they eat, wear, and use, these specious arguments will no longer avail. For the present, we must content ourselves with applying a sales tax in a limited way, probably exempting all foods. When we finally do apply the sales tax to foods, and eliminate the other taxes now applying to foods, we will save the foods buyers upwards of \$1,000,000,000 a year.

"If, and when, government is put on a business basis, we will come perforce to the transaction tax as the one and only fair and honest method of raising revenues needed for the maintenance of government. The opportunity now presents itself to establish a mild transaction or sales tax and give it a chance to demonstrate its feasibility, and its economic soundness."

Far better that a sales tax be spread over a broad base than to place the burden of meeting the Federal deficit on a few. The broader the tax base the lower the rate of levy required. This is following the soundest principle of all systems of taxation. On this point the Raleigh Times, commending a recent editorial on this subject in the MANUFACTURERS RECORD, asserts that if taxes are to be raised in sufficient amount, there must be devised a method by which the tax burden will be distributed, instead of concentrated. Each person has an obligation as a citizen to contribute knowingly to the support of the Government. Any attempt to concentrate taxes on wealth or on other particular classes will fail of the expected return and retard prosperity, because it will drive capital into hiding. The Times, in conclusion, says it is a deplorable circumstance that the coincidence of a dire necessity to secure more revenue and a Presidential election makes anything approximating sane dealing with the problem in hand an iridescent dream. What the politicians want is a broadening not of the tax, but the vote base.



# A Source of Wealth and Its Need of Protection

ELSEWHERE in this issue is an analysis of the factory utilization of fats and oils in the United States. It shows to what extent many manufacturing lines are dependent on vegetable oils, and indicates that domestic production of these raw materials is an important business, especially in the South.

Consumption of vegetable oil in the United States of approximately 3,200,000,000 pounds in a normal business year illustrates the magnitude of this industry. About 2,000,000,000 pounds are produced annually in the United States. More than three-quarters of this is obtained from Southern grown cottonseed, peanuts and soy beans. In a report submitted to Congress by the Federal Tariff Commission, it is shown that annually about 1,000,000,000 pounds of vegetable oils were imported; principally coconut oil, 662,000,000 pounds, and palm oil, 231,000,000 pounds. Much of these importations competes directly with American farmers, labor, and oil-seed crushing mills. There are nearly 500 cottonseed oil mills in the South and these mills expended about \$200,000,000 for materials, fuel and power in 1930.

Next to lard compounds and substitutes the largest consumption of fats and oils is in the soap industry. There is approximately an equal consumption of domestic and of foreign oil, the leading domestic oils or fats used being inedible tallow and greases and cottonseed oil foots, and the leading foreign oils, coconut, palm and palm-kernel. In the lard compound industry most of the oils consumed are of domestic origin, with cottonseed oil predominant. In the margarine industry, much more than half the consumption of oils consists of domestic oleo oil, neutral lard and cottonseed oil. In the paint and varnish industry the principal oils used are linseed, partly of domestic and partly of foreign origin, and tung oil, the last until recently being exclusively an imported product.

Last week in these columns stress was laid on the importance of developing a soy bean oil industry in this country. Progress has been made in this direction, but we still buy large quantities from the Orient.

With the development of a tung oil industry, principally in Florida, Georgia, Mississippi and Louisiana, the South is beginning to add this product to its established vegetable oil industry and can unquestionably supply the nation's needs if adequate protection is given to domestic producers against cheap foreign imports.

A letter from a Texas reader urges the necessity of an effective tariff. He says:

"When the last Tariff Bill was enacted, as far as the

Vegetable Oil Schedule is concerned, we thought we out-traded the farmer, but really it was ourselves."

He states the view that industry has doubtless realized by now that without buying power on the part of the farmer there can be no prosperity, and those who thought they were doing something sound for the consumer or obtaining a selfish advantage by advocating free entry of vegetable oils have been cheating themselves. The American farmer must have protection, for he cannot compete with the tropics with its cheap labor in producing vegetable oils.

Cottonseed oil is selling in Texas today at the ruinous price of 2½ cents a pound in competition with foreign oils. Floods of foreign vegetable oils come into this country practically free of duty. The present tariff protects linseed oil producers and flax growers in this country with a duty on flaxseed of 65 cents a bushel and 4½ cents a pound on linseed oil. The duty on soy bean oil is 3½ cents a pound, and as soy bean is a semi-drying oil it can be substituted to some extent for linseed oil, so it is manifest that it was in the mind of Congress to protect the linseed industry. There is a duty on olive oil to protect the minor olive oil producers of California.

It is a travesty, asserts this Texas business man, that there is no protection for cottonseed producers against the free copra (dried coconut) and coconut oil which carries a limited duty only. The edible vegetable oil schedule is invalidated by free oil from the Philippines, free copra, free sesame seed, free palm and practically free palm-kernel oil, and inadequate duty on sunflower oil.

The Federal Tariff Commission's report says that no definite quantitative statement can be made regarding the "kinds and amounts of domestic oils and fats replaced in domestic industry by such imports." But there is given the total estimated consumption of vegetable fats and oils in the United States and the principal kinds used in various industries, together with the quantity and kinds of principal imports, practically all of which can be produced in this country, or adequate substitutes are available. We know that the 1,000,000,000 pounds imported not only reduces domestic production by that amount but the lower prices of these foreign vegetable oils causes a tremendous loss to American farmers each year and thus curtails their buying power. Every dollar spent abroad for foreign fats and oils goes to build up the business and wealth of foreign countries. When domestic products are bought, both the money and the goods remain at home and American business and labor both benefit.

IN the  
ers  
more  
Printi  
ous w  
is disc  
for 19

The  
labor  
year  
time i  
the re

"C  
cont  
pay  
shou  
Such  
a cor  
pend  
leave  
970,0  
for

"C  
Print  
with  
tive  
total

Las  
reduct  
Print  
5-day  
tioned  
labor  
day h  
an ov

It v  
Print  
total  
the fo  
cation  
durin  
copies  
Govern  
able l  
of G  
consig

N  
initia  
and i  
with  
large  
cotton  
est w  
the c  
mont

## Government Printing Waste

IN the March-April bulletin of the Employing Printers' Association of America, a demand is made for more economical administration of the Government Printing Office. The association charges that prodigious waste of public funds by a prodigal labor policy is disclosed in the annual report of the Public Printer for 1931.

The fact that the disbursement of \$9,195,214 for labor in the production of government printing last year included nearly \$2,000,000 for nonproductive time is thus explained in the following excerpt from the report:

"Critics of the cost of government printing sometimes contend that, as the Government Printing Office does not pay rent, taxes, insurance, interest or profits, its charges should be less than the prices of commercial plants. Such criticism overlooks the fact that these expenses of a commercial plant are more than offset by the vast expenditures of the Government Printing Office for annual leave and holiday pay, amounting to approximately \$1,970,000, which has to be included in the annual charges for Government printing.

"Congress has granted employes of the Government Printing Office 63 days of leave and holidays annually with full pay, making one-fifth of their time nonproductive but chargeable, and constituting 13 per cent of the total annual charges for printing and binding."

Last year the Saturday half-holiday without pay reduction was put into effect and now the Public Printer is recommending that Congress establish a 5-day week. As no proportionate pay-cut is mentioned, this presumably would mean an additional labor cost of \$1,000,000 on account of the full Saturday holiday, with all Saturday work coming under an over-time pay rate.

It was further shown that cost of the Government Printing Office for the fiscal year 1931 exceeded the total for 1921 by \$2,370,000, or 18 per cent. We quote the following about one item: "Total waste of publications recorded by the Government Printing Office during the last ten years amounts to 23,899,000 copies, the printing and handling of which cost the Government more than \$1,000,000." This is a traceable loss, but what about the other millions of copies of Government printed matter distributed free and consigned to the waste basket by the taxpayer?

## Cotton Week

NATIONAL cotton week is to be observed throughout the country, beginning May 16. Last year's initial efforts to stimulate interest in cotton goods and increase the use of cotton were a signal success, with many merchants reporting benefits through larger sales that lasted beyond the week set aside for cotton. Creating new markets for cotton is the soundest way to bring relief to the cotton grower and to the cotton South. The cotton industry for several months has been making a decidedly better showing

than other basic manufacturing groups, in its return to more normal operating schedules.

It is appropriate that the American Cotton Manufacturers Association, representing the cotton textile industry of the South, should hold its annual convention during National Cotton Week. The meeting will open in Atlanta May 20 and continue through May 21.

## Appreciated Railroad Service

RECOGNITION of the great part the railroads of the country have taken in our progress and prosperity is universal among the thoughtful people of the country. The development attained would have been impossible without the pioneers who laid rails across the continent and those who have come after, who, in the growth of these properties, have brought service to a point of excellence never before known. We cannot do without the railroads. They are such a vital part of our industrial life, and under present circumstances they deserve every encouragement. This is being given more generously than before.

An interesting full page advertisement appears in the Pine Bluff, Ark., Daily Graphic. It is topped by a drawing of a freight car, on the side of which in large type appears "Ship and Travel by Rail." The text matter appeals to the thinking citizens and taxpayers who support the railroads (in this case the Cotton Belt and the Missouri Pacific) as a means of helping carriers "to continue to serve, in an efficient manner, the territory which they pioneered and helped to build." It is signed by and paid for by 42 individual business enterprises of Pine Bluff. It is most commendable and worthwhile publicity and comes at an especially opportune time when the railroads are struggling through the fog of a business depression and are beset by unregulated competition.

## Financing Small Industries

A RECENT report by the New England Council to the effect that a finance concern had been formed in Boston to supply needed capital for small industries recalls a suggestion made along similar lines some months ago by the MANUFACTURERS RECORD. The Industrial Investment Corporation and the Management Counsel, Inc., both are organized under Massachusetts laws for the purpose of furnishing industrial concerns with commercial loans and capital funds. The Council states that the practicability of such services to smaller industries has long been a subject of its study.

Adequately capitalized and well-managed enterprises of a similar kind established in various parts of the South should prove profitable and of definite constructive help. The peculiar advantages of the South in material resources and labor offer a broad field for a wide variety of industries.

# Domestic Utilization of Fats and Oils

By OREN L. WHALIN and CHARLES L. STEWART, University of Illinois.\*

OF the 8,916,573,000 pounds of all animal and vegetable fats and oils consumed in the United States in 1929, more than 3,866,000,000 pounds represented vegetable oils, nearly 60 per cent of which was from domestically produced raw materials. The largest consumption of vegetable oils was in lard compounds and substitutes, amounting to 29 per cent of the total utilization; next soap, with 21 per cent; other foods, 17 per cent; paint and varnish, 11 per cent; margarine, 5 per cent; and linoleum and oil cloth, 3 per cent. The other forms of consumption were relatively unimportant.

Cottonseed oil supplied more than 80 per cent of the oil and fats used in lard substitutes, with the remaining 20 per cent well distributed over the field. The large amount of various oils and fats consumed in soap indicates no great necessity for the use of any particular oil or fat to the exclusion of others. Linseed oil and Chinawood or tung oil dominated the consumption in the paint and varnish industries. Soybean oil was used to a lesser extent. The same consumption tendencies as existed in the paint and varnish field can be said to

\* Division of Agricultural Economics, Agricultural Experiment Station, College of Agriculture, Urbana, Ill.

hold for the other drying uses. Castor oil consumption was most important in the textile industry. The really important consumption of vegetable oils in 1929 was represented by cottonseed oil, coconut oil and linseed oil. Total consumption of vegetable oils decreased somewhat during both 1930 and 1931. Exceptions in the case of individual oils were peanut oil in 1930 and soybean oil in 1931.

## Competition

Most of the important vegetable oils, fish oils and animal fats possess a certain degree of interchangeability. This is especially true after a stated amount of processing is performed, such as refining, deodorizing, hydrogenating, and polymerizing. A great many vegetable oils, including soybean oil, require hydrogenation before they can be used in making desirable edible products or the harder soaps.

Soybean oil is often spoken of as the key oil because of its unique position in being utilized in the edible field, the drying field and the soap realm. Most oils and fats are limited to two of these. Naturally the various oils have their special qualities and consequently their superior uses and adaptations. Through

processing they may be drafted into other forms of utilization whenever price relationships make it profitable to employ such utilization. It will suffice to mention that the price of linseed oil has had a tendency to remain above that of other oils, while coconut oil, including copra oil, usually has been slightly lower. The present discussion is limited to qualitative aspects of interchangeability of the various oils with some indication of importance in actual practice.

## Drying Oils

The drying field usually has been considered the highest priced demand outlet for vegetable oils. Linseed oil is considered the best drying oil known and paint in which only linseed oil is used has generally been recognized as the height of quality paint. More recent developments have shown that this is not always the situation. A small amount of replacement of linseed oil by other designated oils of known quality may actually improve the product. Soybean oil falls into this group.

For most outdoor paints, linseed oil is best suited for from 50 to 75 per cent of the oil used. It has been clearly demonstrated, however, that soybean oil of proper quality may replace linseed oil to

Apparent Consumption of Vegetable Oils, by Industries, 1929

Kind	Total Apparent Consumption	Lard Compounds and Substitutes	Margarine	Other Foods	Soap	Paint and Varnish	Printers Ink	Linoleum Industries and Oilcloth Households	Miscellaneous
Total .....	3,866,702,000	1,109,690,000	207,576,000	669,543,000	806,570,000	443,546,000	24,445,000	122,576,000	482,376,000
Cottonseed Oil .....	1,474,006,000	1,083,202,000	28,173,000	350,631,000	12,000,000	.....	.....	.....	.....
Cottonseed Oil Foots.....	108,904,000	.....	.....	.....	108,904,000	.....	.....	.....	.....
Corn Oil .....	138,434,000	.....	.....	133,070,000	5,000,000	364,000	.....	.....	.....
Peanut Oil .....	17,307,000	.....	6,617,000	8,990,000	1,700,000	.....	.....	.....	.....
Soybean Oil .....	19,359,000	82,000	11,000	.....	6,400,000	5,815,000	71,000	3,229,000	3,751,000
Linseed Oil .....	787,680,000	.....	.....	.....	1,916,000	340,166,000	23,894,000	112,855,000	208,849,000
Tung or Chinawood Oil.....	115,721,000	.....	.....	.....	.....	88,386,000	437,000	5,963,000	72,783,000
Coconut Oil .....	662,007,000	20,000,000	171,411,000	53,598,000	344,205,000	.....	.....	.....	.....
Palm Oil .....	230,980,000	1,191,000	1,349,000	.....	192,331,000	.....	7,000	7,000	36,065,000
Palm Kernel Oil.....	84,327,000	.....	15,000	11,392,000	72,920,000	.....	.....	.....	.....
Olive Oil, edible .....	91,836,000	.....	.....	91,836,000	.....	.....	.....	.....	.....
Olive Oil, inedible, and Foots....	54,808,000	.....	.....	.....	53,620,000	.....	.....	.....	1,179,000
Sesame Oil .....	30,076,000	5,215,000	.....	20,026,000	4,835,000	.....	.....	.....	.....
Castor Oil .....	28,835,000	.....	.....	.....	3,730,000	3,287,000	36,000	522,000	21,880,000
Rapeseed Oil .....	16,848,000	.....	.....	.....	.....	.....	.....	.....	16,848,000
Perilla Oil .....	5,574,000	.....	.....	.....	.....	5,508,000	.....	.....	66,000



25 per cent with no ill effects and when the vehicle has been adjusted to favor soybean oil of proven quality even 50 per cent may be used and a satisfactory paint obtained. There actually have been paints manufactured with the use of blown soybean up to 100 per cent, in connection with a suitable vehicle, which met all the requirements of a satisfactory paint. During times of very high linseed oil prices, substitution of a considerable amount of other oils is made for linseed oil and too often with no adjustment of the vehicle to meet the situation. Corn oil and cottonseed oil may even be used, although they are much less satisfactory than soybean oil because of their lower iodine number. Certain fish oils also are used, so that estimates indicate that during a part of the war period there was easily a 25 per cent substitution of other oils for linseed oil.

The important fact from the standpoint of the paint is not only how much of other oils has been used but what adjustments have been made in the vehicle to meet the changing content of the oil used. Tung oil is another of good drying qualities, an oil that may be and is being used to a considerable extent for replacing linseed oil, particularly in varnishes.

### Edible Oils

In the edible field, cottonseed oil, corn oil, peanut oil, coconut oil and soybean oil are important. Cottonseed oil is by far the most important from the standpoint of supply and serves as the regulator of price in this field. These all may be important edible oils but many of them find their most desirable utilization in some particular phase of the field. Cottonseed oil finds its greatest demand in lard substitute products, amounting to about 70 per cent of its consumption in this country. A considerable amount goes into butter substitutes and salad oils but the greater part of the other 30 per cent is utilized by the soap trade. Corn oil on the other hand is utilized largely in salad oils, approximately 80 per cent of its disappearance being for this purpose. Both peanut and coconut oil, used for edible purposes, find their way largely into butter substitutes, known as "nut margarines," which represent more than 50 per cent of the total margarine of the country. Soybean oil has been used less extensively for edible purposes than the others mentioned, until very recently in this country. It may serve in any of the three important food capacities when properly refined, deodorized and hydrogenated to meet the various needs. A large amount is used in margarine in Germany. Most of the fish oils have been used more widely as soap oils than otherwise, but by improved technical methods applied

today they may be substituted for some of the other oils for edible purposes.

### Oils for Soap

The soap industry is supposed to be the "catch-all" for all poor grade oils, fats and greases, an assumption which is not far from the truth. Yet there is some preference, if cost of product used is left out of the picture. The saponification number is an indicator of the superiority of a given oil, fat or grease for soap-making purposes. Hydrogenation may reduce the unfavorable qualities for soap making but cannot always entirely eliminate them. In addition, the process usually adds about one cent per pound to the cost of the product.

Coconut oil has been considered by some as almost indispensable to the making of most soaps. The facts do not seem to bear this out, except for the salt-water soaps and some of the special high-grade toilet soaps. Palm kernel oil for these special uses is about the only substitute available for coconut oil, as its qualities are very similar to those of coconut oil. The saponification numbers of all the other oils and fats run along fairly close together and with special treatment they may be utilized in any of the demands made on a soap oil except for those previously indicated. Soybean oil serves best as a soft-soap oil and may entirely replace linseed oil for this purpose. Because of the rather general

suitability of such a wide variety of oils and fats for ordinary soap and even for more specialized forms, through certain refining processes, several forms of oils and fats may be used at one time or may be varied from time to time to produce a given grade of soap.

This discussion indicates that most of the important oils and fats may be utilized in a variety of ways, if supplies and relative price conditions warrant. Under ordinary circumstances, however, they have a rather definite field of utilization that demands the greater portion of their consumption. The exception to this is more clearly illustrated in the case of soybean oil. A summary of the qualities and uses of the more important oils and fats is shown in the accompanying table.

Another important factor in determining vegetable oil utilization in the United States has been the duty levied on various oils and oil materials. Most of the coconut oil, palm and palm-kernel oil can come in duty free and substitute to a considerable degree for domestically produced oils. If there were a duty on all oils and raw materials competing with domestically produced oils and fats, the entire group of domestic producers would be on the same plane of production costs in this respect, and at the same time our country would be less dependent on other countries for our vegetable oil supplies.

*The Iodin Number\*, Saponification Number†, and Uses of the Leading Oils and Fats*

Product	Iodin Number	Saponification Number	Uses
Cocoonut Oil	8-10	246-260	Important food and soap oil. Chief food use is in "nut-margarin." Some use as lard substitute, confectionery trade and as filler for commercial cakes and wafers. Excellent for cold process soap making, especially shaving and marine soaps.
Corn Oil	111-130	188-193	Refined oil used particularly in salad oil, but also in oleomargarin and lard substitutes. Crude oil used in soap making and in dressing leather.
Cottonseed Oil	108-110	193-195	Refined used most extensively in lard substitutes, but also in making margarin and salad oils. Foots and inferior grades of oil are used in soap making. Other uses are in manufacture of washing powder, glycerine and water-proofing preparations.
Fish Oil	139-173	191	Used in paints as partial substitute for linseed oil, especially in paints for smokestacks and in oil cloth and linoleum industries. Used in soap making. Used more recently in butter substitutes.
Linseed Oil	173-201	192-195	Used chiefly in paints and varnishes. Also used in putty, oil cloth, leather cloth, linoleum, printing ink and rubber substitutes. Used in soaps.
Palm Kernel Oil	13-17	242-250	Used in manufacture of butter and lard substitutes. Chief use in manufacture of cold process soaps.
Peanut Oil	83-100	190-196	Used in manufacture of "nut" margarin and salad dressing. Used in soaps, as a burling oil in silk manufacture and in artificial leather industry.
Soybean Oil	137-143	193	Considerable quantities go into paint, varnish, enamel, linoleum and water-proofing trades. Used for soap making. Utilized in large variety of food products.
Tallow	35-46	192-200	Used in lard substitutes and oleomargarin. Inedible grades go into soap making, illuminating oils and for lubricating purposes.
Whale Oil	121-147	188-194	Used chiefly in soap, in tanning leather and as an illuminating oil. Used slightly for edible purposes.

\*High iodine number indicates a good drying oil and consequently a good paint or varnish oil.

†Saponification number indicates the number of milligrams of potassium hydroxide used in the saponification of the oil and a high number indicates desirableness for use in soap.

## Conditions in Kentucky Coal Field

Peaceful solution of mining problems in Harlan County, Ky., a storm-center of labor dissension, is being hampered rather than hastened by the intervention of outsiders, declared Thomas T. Read, Vinton Professor of Mining Engineering at Columbia University, in a recent address. Capitalism, he asserted, is not responsible for the trouble, nor will communism improve the situation.

Housing conditions, wage rates, "and the various things that most directly affect the life of the miner and his family at Harlan do not seem to differ greatly from those in other coal mining districts, and are certainly better than in some of them," Prof. Read maintained. Further:

"In so far as capitalism has anything to do with this situation, it seems clear to me that it has been a force for stabilization, rather than the reverse. No one could possibly desire more earnestly than the operators to have mines operate full time, while whatever there is to commend as to housing and living conditions has been brought about through their initiative and effort, not by others.

"The argument that better results could be obtained under some other system is, almost without exception, advanced by people who do not know enough about coal mine operation to know what the problems are, much less know how to solve them.

"The basic problems arise from the fact that the amount that can be paid for mining a ton of coal is limited by the amount that the coal can be sold for, while the number of tons that can be mined in a month is limited by the number that can be sold, and these difficulties are evaded by vague generalizations.

"These generalizations assume that under schemes varying from government regulation, through government operation, and on to unadulterated communism, it would somehow be possible to decrease the number of mines in operation, afford steady employment at those that continue, and raise the price of coal so that the gross earnings of miners could be increased."

Existing coal mines in this country, Prof. Read pointed out, are able to produce twice as much coal as was consumed in years of the greatest demand, or three times as much as was needed in 1931. Approximately three-fourths of the cost of producing coal is paid out in wages. And finally:

"The fundamental difficulty is that the total sales value of all the bituminous coal produced in the United States in 1931 was not enough to provide an adequate living for all the people who seek to make their living in its production.

"Not only must fuel oil and natural gas be considered in studying the situation, but the many ramifying inter-relationships in industry must be taken into account. All human experience indicates that so difficult a task, if it can be

performed at all, will be accomplished by those experienced in such matters.

"To couple pressure upon them to do something about it, with insistence that it be accomplished in accord with certain social theories, inevitably leads to conflict rather than to progress.

"Solving the problem simply by raising the price of coal, under government control, is not an easy solution. Railroads use more than a quarter of the total coal output, and they are already asking for rate increases in order to meet their operating expenses. Many other consumers would find themselves in difficulty if the price of coal were greatly raised, as it must be if the whole number of people who seek to find a living from the production of coal are given employment."

## \$1,575,000 Federal Building

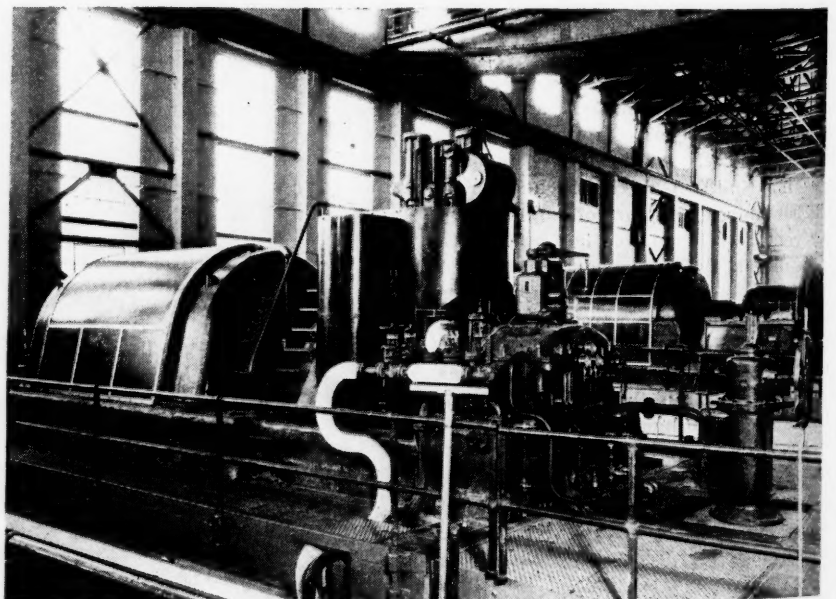
Knoxville, Tenn.—Bids will be opened April 26 by the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, for the construction of a new court house and post office building here. The structure will be 251 by 147 feet, 64 feet high, 3 stories and basement, of Tennessee marble, to cost about \$1,575,000. It will be equipped with a steam heating plant with smokeless boiler, and two electric elevators. Baumann & Baumann, Knoxville, are the architects.

## \$350,000 Florida Residence

Miami Beach, Fla.—General contract to erect a \$350,000 winter residence here has been awarded by Warren Wright, Chicago, to R. W. Edholm, Inc., local builder, according to John G. McKay, Mr. Wright's attorney. Martin L. Hampton, Miami Beach, is the architect. The residence will occupy a site in Collins avenue near Fifty-second street, with a 200-foot frontage on the ocean and a depth of 600 feet. The Collins avenue facade will consist of a gate lodge with a 12-foot entrance to the court and a tile and stucco garage, to which will be connected an apartment for servants. The residence will be of reinforced concrete, supported by concrete piling. Gas-steam radiators will be installed for heating and facilities installed for pool and other flood lighting, incinerator, laundry, telephone system, etc. Contract calls for 200 feet of seawall with a 75-foot return on the north side and a groin of 150 feet into the ocean, carrying a cement walkway and railing on top.

A. K. Winget, formerly secretary and treasurer of Textiles, Incorporated, Gastonia, N. C., has been elected president of the Efrid Manufacturing Company, Albemarle, N. C.

## Turbine Room of Steam-Electric Power Station at Houston, Texas



Total installed generating capacity of the Houston Lighting & Power Co. Deepwater steam-electric station is now 147,000 kilowatts, a virtually continuous expansion program having been under way at the plant since the first unit was installed some years ago. This view shows, in the foreground, a 13,000-kilowatt unit operating at 1400 pounds pressure, which was placed in service February, 1932. Immediately behind the new unit is a 35,000-kilowatt unit, placed in operation in August, 1931.



# Naval Stores Situation

THE whole naval stores situation is complicated. Like lumber, coal, oil and other basic industries, the production of naval stores has been greatly in excess of consumption. Not only do we find inroads by substitutes, but also taxation problems and the cost of supplies have militated against proposed economies; and apparent inability to secure wholehearted cooperative effort in marketing, combined with the problems of factorage leave the industry facing poverty, bankruptcy and disillusion, unless definite and concrete facts can be ascertained and a definite course of action predicated.

Aggregate production of the gum producers is about seven times that of the wood producers in turpentine and five times that of the wood producers in rosin. There are approximately five steam distilling plants, a dozen destructive distillation plants, and some 1700 gum producers in the states of Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, North and South Carolina.

In order to determine the most important problems of the industry and points on which wide differences of opinion exist, a questionnaire was sent out by the Timber Conservation Board to some hundreds of the more prominent gum producers. The high lights of the responses are here summarized:

The supply of timber available for turpentine is permanently decreasing in about half the total area, and permanently increasing in about one-fourth the area. The remaining quarter numbers those few sections where intelligent reforestation and fire protection are most intelligently observed, resulting in a more balanced source of material.

The general trend is for the naval stores producer to own his own timber, although about 30 per cent of producers lease the production privilege from timber owners.

About two-thirds of the producers believe there is an increasing tendency for the consolidation of small units and centralization of operations. This, it is felt, would lead to intelligent croppage and reduction of waste, and would also tend to balance supply and demand.

The industry as a group admits overproduction, but a few of its more farsighted members feel that certain un-

---

*Excerpts of an address on "The Economic Development of the Forest Industries of the South" by Dr. Henry Mace Payne, Executive Assistant, United States Timber Conservation Board, before the Second Florida Commercial Forestry Congress at Ocala, April 15. The Timber Conservation Board is unique in that its work is supported by the forest products industries directly interested, and not by taxation at large. Three Cabinet officers, three timber men, three representatives of the public, and one representative each from the railroads, the paper and pulp industry, the farm group, and professional foresters, comprise the Board, of which Ripley Bowman is the executive head.*

---

sound marketing practices (a moot question), should be corrected; that substitutes for naval stores should not be encouraged; and that intelligent, forceful, specially devised and directed advertising of naval stores would greatly assist in correcting present evils.

Asked for suggestions to remedy overproduction, about two-thirds of the producers said that less croppage was the only solution. Several felt that nothing but the inevitable working of the law of supply and demand would solve the problem, and that there was nothing else to do. A gratifying number advocated research for new uses, and special advertising. One producer said that nothing short of Federal control would ever save the industry.

About 85 per cent of the replies indicated a voluntary reduction in their own production this year, and it is now developing that last year's drought will have a beneficent economic effect on the industry this year by lessening the natural flow.

In response to the request for sugges-

tions as to the best method of securing new outlets for naval stores, a gratifying number indicated their faith in cooperating with the Pine Institute of America, and continuation of cooperative research activities by the Mellon Institute at Pittsburgh; the majority felt that a general survey of the industry is essential, and that a well-planned advertising and publicity program would help.

For the industry itself, those who gave the matter intelligent thought favored the working of no small timber, better cooperative distribution and orderly marketing, large unit refineries, elimination of high interest rates and excessive prices now paid for supplies, checking of losses from leakage and fire and devising metal packages for rosin, and the selling of turpentine in cans. These suggestions were merely voluntary offerings on the part of individual producers, but showed at least a thoughtful desire for the common good.

The industry was almost unanimously in favor of consolidation of small operations; having an intelligent survey made; balancing production against consumption; and doing everything possible to secure more equitable taxation. They were also agreed on the necessity for better education in their common problems, and getting a higher degree of cooperation within the industry itself.

A large majority were opposed to any form of Federal or State regulation of naval stores production.

In the matter of fire protection, the industry in general agreed on cooperation with the Forest Service, both Federal and State; a few thought there should be a special fire tax levied on rosin and turpentine; a small minority said that this is a matter for the individual to solve and should not even be discussed.

When we consider that turpentine stocks on hand increased from about 4,000,000 gallons in 1926 to 6,500,000 gallons in 1930; and that stocks of rosin increased from 444,000 barrels in 1926 to over 600,000 barrels in 1930; and that over 40,000 wage earners are employed in the industry, receiving over \$15,000,000 a year in wages, we can no longer ignore the necessity for constructive action.

From the strictly economic side alone, the industry pays for materials, contain-



ers, fuel and purchased energy over \$10,000,000 a year; and the value of its products, f. o. b. plant, is about \$40,000,000 a year. The value added through application of labor and power to raw materials through manufacture, is about \$30,000,000 a year. This is a direct increment of wealth, added by the industry to the available resources of the United States. And yet notwithstanding that over 300,000 gallons of turpentine and 1,300,000 barrels of rosin are exported annually to 12 foreign countries, as a direct result of over-production and consequent stagnation the price of turpentine decreased from an average of 96½ cents per gallon in 1926 to 48¾ cents in 1930; and rosin from \$11.35 a barrel in 1926 to \$7.37½ in 1930.

Perpetuation of the natural forest resources in the Southeast is dependent on the education of the general public to the economic advantages of raising trees as a "crop," and on the fact that soil and climatic conditions allow greater possibilities along this line in the Southeast than anywhere else within our borders. The utilization of wood waste, whether in the form of cultural thinnings or the tops and trims from logging operations, by pulping process, and the production of naval stores through correct operating practices would result in land utilization to the greatest economic degree.

The Timber Conservation Board senses the necessity of an intensive survey of the naval stores industry, to secure unprejudiced, accurate and completely competent information and fundamental data on which to predicate constructive action for the relief of the industry.

### Fire Waste Prevention

The city of Owensboro, Ky., heads the list of winning cities in the 1931 National Inter-Chamber Fire Waste Contest, sponsored jointly by the National Fire Waste Council and the Chamber of Commerce of the United States. Owensboro will receive an award at the annual meeting of the United States Chamber in San Francisco next month as making the greatest progress in checking fire waste of any of the 344 cities in the contest.

### \$3,000,000 Building Foundations

St. Louis, Mo.—Bids will be opened May 3 in the office of Jas. A. Wetmore, Acting Supervising Architect, Treasury Department, Washington, for the excavation and construction of foundation of a new \$3,000,000 post office and courthouse building here. Mauran, Russell & Crowell, St. Louis, are the architects.

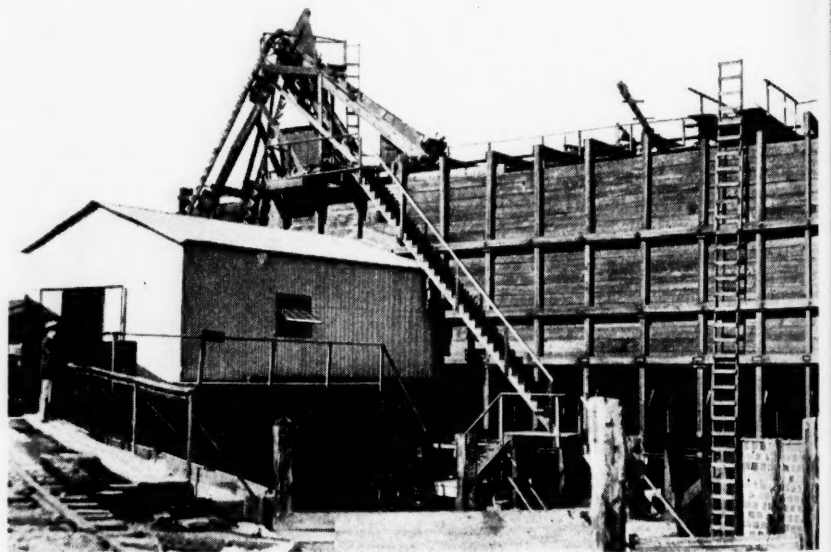
## A Concrete Mixing Plant

Numerous central concrete mixing plants are being established in the South, and the use of ready-mixed concrete is growing, its use extending not only to foundation work and building construction generally, but also to roads, pavements and bridges.

A new development of this type is the plant of Cromer & Thornton, Inc., Atlanta, Ga., which has a capacity of 300 yards of mixed concrete every eight hours. In this plant the 28-S Rex mixer, driven by an electric motor, is placed under bins which hold 40 carloads of sand, gravel and crushed stone. The mixer is equipped with a Blaw-Knox 5000-pound capacity weighing batcher for batching the aggregates direct from storage bins, the materials being handled from a tunnel beneath the railroad trestle by a Barber-Greene belt conveyor serving these bins. The company is

using Mack trucks with square steel flat-bottom dump bodies for delivery equipment.

F. C. Sturmer, consulting engineer, formerly of Chicago, is in charge of the engineering department of this plant. "Use of the new central plant," Charles F. Cromer, president and general manager of the company, declares, "insures a better grade of concrete, since the plant is equipped with accurate measuring devices which put in the exact quantity of cement, stone and other material needed for any particular job. It eliminates all waste for the builder, as he pays only for the concrete he actually orders. It eliminates the mess around a building job when concrete is mixed on the spot, and it cuts down labor costs. Concrete, accurately proportioned for any kind of building job, can now be delivered."



Cromer & Thornton Plant in Atlanta, With Capacity of 300 Cubic Yards of Mixed Concrete in an 8-Hour Shift

### \$1,000,000 Telephone Repairs

Washington, D. C.—A recapitulation of storm damage March 6 to telephone facilities of the Chesapeake and Potomac Telephone Companies in Maryland, Virginia and West Virginia shows that extraordinary repairs will involve expenditures of more than \$1,000,000. High winds and snow caused interruptions to the service of 23,650 telephones, 1087 long distance circuits and isolated 75 central offices. Replacement of 21,400 poles will be necessary, and 10,000 miles of open wire lines. The construction of

60 miles of cable to replace open wire local and long distance circuits will insure less interruption from future storms in areas in which this type of plant will be constructed. More than 500 linemen and a large force of engineers are engaged in restoration work.

Rosen & Fischel, Inc., Chicago, submitted low bid at \$208,250, to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, for the construction of a new post office building at Fort Myers, Fla.

# 3,000,000-Gallon Water System

**I**MPROVEMENTS to the water system at Hattiesburg, Miss., designed to serve the city for many years, have involved about 60,000 feet of U. S. Pipe & Foundry Company DeLavaud cast iron pipe of 6 to 24 inches in diameter, about 35,000 feet being of 20-inch diameter. The plant buildings are located four miles from the residential section of the city, and from this plant two lines of 20-inch pipe extend to the city limits, thence around the city, with smaller sizes feeding into the original system.

All pipe work, with exception of that in the buildings proper, was handled by the Volz Construction Company of Memphis, Tenn., under Thos. H. Allen, Memphis, engineer for the Municipal Water Works for the city of Hattiesburg.

The city has 11 flowing wells laid out over an area of about 2000 square feet along the banks of the Bonie River, north of the city. These wells, driven in low ground, empty into cast iron collecting mains, which run to the low duty station, then from the pumps to the main station on top of a 1000-foot hill, from where the water is filtered and taken to the city through the two lines of 20-inch pipe. These feeders for a short distance are parallel, then diverge, one connecting into a district on the north side of the city, the other connecting into a distribution system farther south.

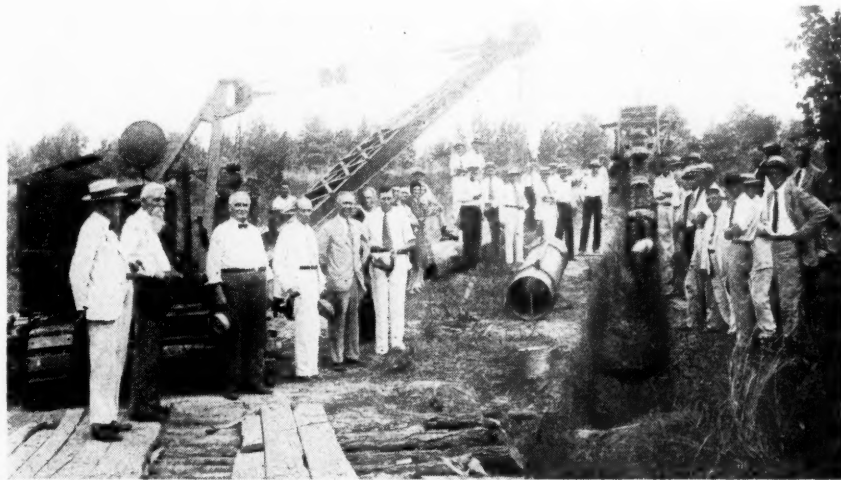
The job presented no unusual difficulties with exception of numerous stumps encountered through the open country between city proper and plant, and the crossing of Gordan Creek. The work was done with an Austin trenching machine, the boom of which was dropped at regular intervals to cut bell holes sufficiently large for easy access to the bottom side of the joint. All joints are lead and oakum, a type "R" hammer being used, with a portable gasoline engine driven compressor and long-stroke slow-speed hammer. A portable gasoline pot was used for melting the lead. In testing the lines a 150-pound water pressure was maintained for 8 to 10 hours; the contractors report that it was necessary to repair a total of only about 15 joints, the contract calling for all joints to be thoroughly dry when tested and to show no leakage. From 700 to 900 feet of 20-inch pipe, and 1000 to 2000 feet of 12-inch pipe was laid daily.

The line crosses under Gordan Creek

on concrete piers supported on piles, the pipe being cut at a level several feet below average level of the creek bed. The crossing work was accomplished in a unique manner: Construction forces erected an aerial cable which was used to handle pile and pile-driver, although the pile-driver was anchored in place over each set of piles, there being two piles to each pier and one pier to each

length of pipe. After the driving of the piles they were cut off and concrete piers poured. The water of the creek was diverted while construction operations were under way. The ditch was sheeted, and the sheeting served as forms for the lower part of the piers.

The pipe connecting the various wells was installed on a flat grade, with a cut-off on the wells, with an average



Installation of First Pipe at Dedication Services Held by City Commissioners at Hattiesburg, Miss.



Concrete Foundation, With Timber and Sheet Piling, Carries Main Across Creek



level ground elevation of about 10 feet deep. In handling this work, sand and water was encountered for the last five feet of the cut, and it was necessary to have a wide cut and make the joints up after the water had been pumped out. All other work on the distribution was done with the pipe receiving an average of 2½ feet of earth cover, with exception of some pipe around the plant proper which was about 25 feet deep.

The new system is designed for a capacity of 3,000,000 gallons, although present consumption is only a little over 2,000,000 gallons. By the addition of more pumping equipment the capacity can be raised readily to 5,000,000 gallons.

### Government Heating Equipment

Washington, D. C.—The Combustion Engineering Corporation, New York, was recently awarded contract by the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, for central heating plant equipment to serve about 26 government buildings. This equipment will consist of four 2500-horsepower Walsh & Weidner sectional header boilers, made by the Hedges-Walsh-Weidner Co., Chattanooga, Tenn., subsidiary of Combustion Engineering Corporation, and 4 C-E multiple retort stokers of the super-station type. The equipment will be installed in a new central heating plant in the Triangle and will be a portion of that Government development.

In addition to boilers and stokers, the contract includes steel encased boiler settings, water-cooled furnaces and forced and induced draft fans and drives. Boilers are designed for 400 pounds pressure and are guaranteed for a production of 215,000 pounds of steam per hour continuous, and 237,000 pounds maximum, from and at 212 degrees F. Stokers will be 15 retorts wide, 45 tuyeres long, with a projected grate area of 480 square feet each, and equipped with double-roll clinker grinders.

Government architects and engineers have designed the plant to harmonize with the architecture of the surrounding Government buildings. United Engineers & Constructors, Inc., Philadelphia, are consulting engineers on the project.

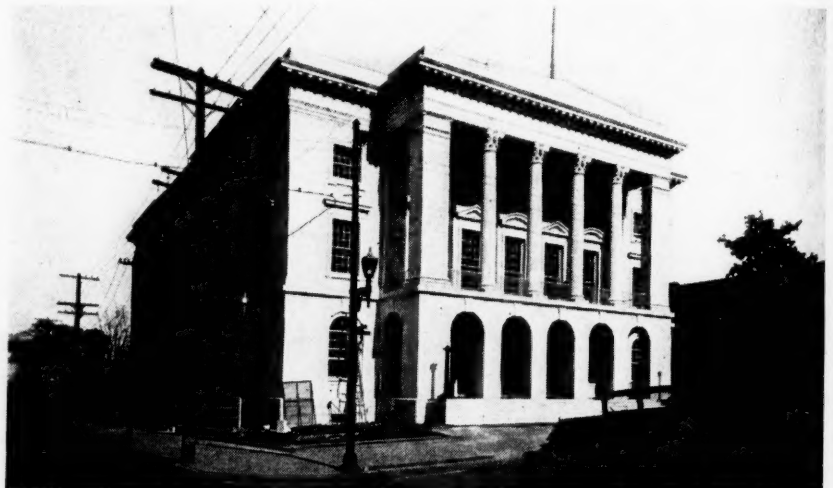
### American Institute of Architects

Ernest J. Russell, St. Louis, has been nominated for president of the American Institute of Architects to succeed Robert D. Kohn, New York, who retires after serving two terms. The Institute will elect officers and directors at its sixty-fifth convention to be held in Washington, April 27-29.

## Salisbury Federal Building

On March 27, the Federal building here illustrated was placed in use at Salisbury, N. C., following completion of a \$150,000 addition and improvements to the old building. In addition to accommodating all post office facilities in this rapidly-growing city of the Piedmont Carolinas, the new structure houses Federal Courts, with offices for all court officials, and such government agencies as Internal Revenue Department and Army and Navy recruiting offices. The old part of the building was cleaned with steam, and the structure now gives the appearance of an entirely new building. The Grahn Construction Co., Atlanta, were general contractors for the addition and the remodeling. Principal sub-contractors included: J. J. Morton

Co., Charlotte, exterior marble and stone; A. T. Deal, Charlotte, exterior marble and stone setter; Atlanta Tile & Marble Co., Atlanta, interior marble, tile and terrazzo; Bryant Electric Co., High Point, N. C., electric work and fixtures; J. L. Powers, Bennettsville, S. C., plumbing and heating; Merrell P. Wilson Co., Atlanta, painting; Hopton Bros., Atlanta, plastering; E. P. Cuthrell, Birmingham, hardwood floors; Shuman Roofing & Heating Co., Charlotte, roofing and sheet metal work; Columbia Lumber & Mfg. Co., Columbia, S. C., millwork; and Guaranteed Waterproofing Co., Greensboro, N. C., steam cleaning building. E. L. Graham was the building superintendent, and R. A. McGarry, construction engineer.



This Structure Now Houses All Federal Courts in Salisbury, N. C., As Well As the Local Post Office Facilities

### \$1,000,000 Waterway Project

Charleston, S. C.—Major General Lytle Brown, Chief Engineer, U. S. Army, Washington, recommends to Congress a modification of the waterway project from Winyah Bay to Charleston, which would provide a channel 90 feet wide and 10 feet deep, involving an estimated cost of \$1,000,000, with \$100,000 annually for maintenance for three years and \$46,000 annually thereafter. The channel would run by way of Estherville-Minim Creek canal, North Santee River, Four-Mile Creek and along the general route of the existing waterway past Sullivan's Island to Charleston harbor, with a branch channel of like dimensions to McClellanville. Local interests would provide necessary rights-

of-way, it is declared, with disposal areas for construction and maintenance when required, and would also assure that the existing Cove Inlet bridge would be altered when and as directed by the Secretary of War to facilitate reasonably free navigation.

### Foundation \$2,000,000 Building

Norfolk, Va.—Low bid to construct the foundation for a \$2,000,000 Federal building here has been submitted to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, by the Virginia Engineering Co. Inc., Newport News, Va., at \$210,000. Benjamin F. Mitchell, Wickham C. Taylor and Rudolph, Cooke & Leeuwen, all of Norfolk, are associated architects.



# Obsolescence Insurance Through Modernization

By J. C. KNAPP, Vice-President, Otis Elevator Company

**D**EVELOPMENT and expansion of the insurance idea is one of the indices of the progress of American business; it is evidence of an intensifying realization that stability and safety are fundamentals of commercial and industrial success.

Basically, insurance is protection or assured safety; more specifically, it is a guarantee against interruption in the processes of life and business and a potential compensation against those hazards which threaten life and property with either sudden or gradual destruction. With physical property, in the form of buildings, as with human beings, there is now an accepted form of insurance against old age. In the case of human beings it is called life annuities; with physical properties it is an amortization reserve. Sketchily defined, amortization is the creation over the years of a fund to compensate for the loss of property when, because of old age, it ceases to be useful or remunerative.

Amortization admits the inevitability of total loss, final destruction. In that principle, as applied to properties, it is faulty because of its inadequacy. It does not extend its beneficence to the limit of its possibilities. It accomplishes only half a task; a similar fund could prevent loss, just as effectively as it compensates loss. There is in America, I know, a very generally accepted theory that buildings are a deteriorating investment and that ultimate loss is inevitable. A building owner apparently will go on from year to year and see his property become more and more antiquated. When this happens the building has ceased to earn what its reputation and management entitle it to, and all because the owner has not fought off the stealthy inroads of obsolescence.

Obsolescence insurance does not recognize that ultimate loss is either necessary or inevitable. In principle it maintains that property may be kept up to its original investment value by the in-

telligent allocation each year of a sum of money for that purpose. In effect it provides the means of carrying out a definite plan, a regular and continuing program of modernization as one part or another of the building or its equipment becomes out-of-date. There are two phases of this process of obsolescence. One is the aging of that part of the equipment which is not seen or directly used by the customer or patron; this includes appointments such as the heating plant, the plumbing and general equipment. The other is the part with which the public comes in direct contact, both visually and physically. There seems to me no question that this latter is the more important, particularly in its effect on the mental attitude of the customer or patron.

The public resents poor accommodations when it comes to buy or transact business. Nothing will create this unfavorable atmosphere more certainly than an out-moded elevator. The manufacturers of these appliances must progress; they must make each succeeding model better than the one preceding; they must provide more comfort and convenience. The public expects less crowding, fewer waits and more pleasant conditions generally. I am discussing elevators in particular for the very good reason that I am more familiar with that part of a building's equipment than with any other. But the principle is the same; the tools with which we do business must be kept efficient and up-to-date.

It is obvious that without any reserve for repairs or replacements, a property and its equipment will rapidly deteriorate and its earning power decrease certainly and surely as the years pass. Genuine, 100 per cent obsolescence insurance provides not only for maintenance but for modernization as well. It entails the adoption and installation of any new device which the manufacturer may have to offer; it means meeting the

growing demands on the part of the public for every new convenience and comfort which inventive genius has to offer.

There really is no such thing as fatality in building investments; they can be made permanent and profitable by full coverage in obsolescence insurance.

## Sees Trade Improvement

St. Louis, Mo.—Signs of trade improvement are evident in the Southwest, according to M. H. Cahill, president of the Missouri-Kansas-Texas Railroad Company, who told stockholders at a recent meeting here that the Southwest shows signs of "slowly, but surely, emerging from the general business depression." He stated that the banking situation seems considerably stronger than in the past several months; the oil industry has been stimulated by improved prices; the purchasing power of the farmers is increasing, and there are other indications of an upturn in business.

During the first quarter of this year 40 new industries were located along the Katy lines, representing an investment of \$618,000, with a potential production of 7000 cars of new freight annually.

Stockholders elected Joseph M. Bryson, St. Louis, chief counsel for the road, as director to fill a vacancy caused by the death of C. Haile, former president. Fourteen directors were re-elected, including Mr. Cahill.

## \$338,000 Post Office Bid

Lynchburg, Va.—The Lagura Construction Company, Inc., Gary, Ind., submitted low bid at \$338,300, to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, to erect a new post office building here.

# Alabama Livestock Project

*How bankers, industrial leaders, farmers and others are cooperating in a broad movement to advance the interests of an entire community*

**A** MOVEMENT to further a more diversified agricultural program for Alabama through development of its livestock industry was launched recently in Montgomery. The importance of the project is evidenced by the leadership of the movement. The Spring Issue of the Agricultural Bulletin issued by the Atlanta and West Point Rail Road Company, the Western Railway of Alabama, and the Georgia Railroad, broadly discusses this progressive livestock development program.

The initial meeting at Montgomery, writes P. O. Davis, was attended by more than 100 of Alabama's leaders in industry, banking, and agriculture, all representing capital aggregating \$1,500,000,000. The immediate objective of this group was organization of a livestock credit corporation (or a livestock bank) to provide money needed to promote the livestock industry in connection with general farming. Its obvious purpose was to finance livestock, wisely and constructively, for the success of the grower and also the investor.

A committee was named by the chairman, Jesse B. Hearin, secretary of the Montgomery Chamber of Commerce, to work out plans for launching the bank. This committee is composed of W. A. Bellinger, Montgomery, chairman; Thomas W. Martin, president of the Alabama Power Co., Birmingham; Will Bruce, Catherine; H. E. Snow, manager Union Stockyards, Montgomery; J. B. Barnett, Monroeville; Wiley Alford, Columbia; E. C. Martin, Selma; and H. C. Ryding, president, Tennessee Coal, Iron and Railroad Co., Birmingham.

There was evidence of the realization that agriculture and industry are inseparable in Alabama, that the welfare of each is involved in the welfare of the other. One cannot prosper indefinitely at the expense of the other.

A striking example of this feeling was revealed by Hugh Morrow, well-known industrial leader of Birmingham, who lamented the low income for agricultural workers and declared that this must be corrected, not only for the good of indus-

try but also for the good of agriculture.

The meeting had been called by the Alabama Industrial Development Board and the Alabama State Board of Agriculture, with cooperation of the Montgomery Chamber of Commerce. Governor B. M. Miller was advised of the plans, which had his approval.

It is expected that the proposed credit corporation will serve most of Alabama, but special attention will be given to the Black Belt where natural conditions are exceptionally favorable to livestock production. Beef cattle, dairy cattle, sheep and hogs fit into Black Belt farming for profit and success.

This new organization will bring business men and bankers into the farming picture as never before. They will work with the extension service as an educational organization and with other forces engaged in agricultural improvement and development work.

## Development Under Way

One of the most progressive agricultural sections of the South centers around Montgomery. For generations it was a great cotton-producing region. It is still an important cotton center; however, within the last generation this new industry which has appeared bids fair to outstrip cotton in its importance in the finances of the region. This shift in farm enterprises has caused a change in the cropping system. An increasingly large portion of crop lands is seeded to feed crops to take care of rapidly-enlarging herds of dairy and beef cattle and other livestock.

The major part of the land in Montgomery County belongs to the famous "Clover Belt." This soil is noted for its high lime content, making it naturally adapted to clovers and legumes that thrive in lime soils. Some of the best pastures in the South are found in this section, being seeded naturally with varieties of grasses and clovers growing wild in the region.

With cheap and abundant feed it is natural that close attention should be paid to livestock. In Montgomery and

nearby counties there are 366,000 cattle, 427,000 hogs, and each year approximately 1,000,000 chickens are sold.

The Union Stock Yards in Montgomery has been active in promoting this development. The annual sales of livestock through the Montgomery stock yards amount to \$5,000,000.

In this section are a number of large dairies, milking 50 to 100 cows in sanitary barns, with the milk placed in electric refrigeration immediately. Equipment is of the most modern type, and everything is done to assure a high quality of milk to the consumer.

Advancement in growing of beef cattle, sheep and hogs has kept pace with dairy interests. Several sales of registered beef bulls are held at the Montgomery Union Stock Yards each year. These go to the farms of this county and adjoining counties and improve the value of the animals sold. The foundation of the beef cattle industry is abundance of natural grasses and clovers. Thousands of acres of hairy vetch and Austrian winter peas are seeded each winter for grazing and soil building.

The growing of farm crops still demands considerable attention from Montgomery County farmers. Cotton is still a major crop over a large part of the county. In the northern part are found many of the best fields of cotton in Alabama.

During recent years there has been great advance in rural electrification. All the smaller towns and many of the farm communities are served from lines of the Alabama Power Company. Besides the home conveniences, this has made possible refrigeration plants in the dairies, and has brought about the marketing of a better grade of milk. Electrical conveniences have eliminated much of the drudgery of the farms. Telephone lines cross the county in every direction.

In industry, the city of Montgomery has kept pace with the agricultural progress of the county. Besides the Union Stock Yards already referred to, there are many other developments in industry

that are  
Alaga S  
ally kn  
W. & W  
farmers

1-H  
Parti  
4-D  
of A  
Mont  
ing p



that are agricultural in nature. The Alaga Syrup Company makes the nationally known syrup of that brand. The W. & W. Pickle Company contracts with farmers in Southeast Alabama to grow

cucumbers for pickling at its Montgomery plant. The first solid train load of pickles ever shipped went from this plant over the West Point Route. The West Boylston mill, also on the tracks of

the Western Railway of Alabama, is one of the most modern cotton mills in the South. Many other industrial plants using agricultural, timber and other products are found in Montgomery.



*Courtesy Agricultural Bulletin.*

1—H. E. Snow, president Montgomery Chamber of Commerce. 2—L. A. Edmonson, county agent, Montgomery, Ala. 3—Partial view of White Leghorn flock on International Harvester Company Demonstration Farm No. 4 in Montgomery County. 4—Dairy herd on farm of E. W. Norris. 5—Feeding out hogs on farm of W. J. Garnand, Mt. Meigs, Ala., on Western Railway of Alabama. 6—Beef cattle on feed lot, farm of C. W. Ritternour, president, Montgomery County Farm Bureau. 7—One of Montgomery County's consolidated schools: Schools in this county are unsurpassed anywhere in the United States. 8—Breed-Montgomery County's consolidated schools: Schools in this county are unsurpassed anywhere in the United States. 9—Grading lambs at Montgomery Stock Yards. 10—Beef calves in pen of Mammoth Bronze turkeys, farm of E. W. Norris. 9—Grading lambs at Montgomery Stock Yards. 10—Beef calves on farm of W. H. Sellers & Son, Hope Hull, Ala.



# IRON, STEEL AND METAL MARKET

## Fabricated Structural Steel Makes Favorable Showing—Finished Steel Prices Are Steady

Pittsburgh, April 18—[Special.]—Developments of the last week as to steel demand have been somewhat mixed in character but on the whole prove promising as to arrest of the recent declining tendency, with chances that a definite upturn is in the making.

A favorable showing is made by fabricated structural steel work coming up during the week for bidding, three Federal jobs adding about 30,000 tons to work in sight, involving a postoffice in New York and two buildings in Washington. Awards reported were of ordinary proportions. Dividing the period since January 1 into two halves, awards in the two halves have been practically identical.

An unfavorable showing is made by the automobile industry in that it has not increased its purchases to the extent predicted or altogether in keeping with expectations based on the intensive sales campaign. However, the industry has been buying steel at a slowly increasing rate since February, and greatly increased Ford purchases are a certainty since the buying from that quarter so far has been extremely light. Railroad buying is slowly increasing. The rail mill in the Pittsburgh district resumed operations last week for a run of at least a fortnight.

The stability of finished steel prices is attracting more attention and is believed to be permanent. On all new business lately, full prices have been obtained without difficulty and there remains less than a fortnight at which any deliveries on old contracts are allowable. Apparently the lightness of demand is making sellers all the more rigid in their price attitude, for the tonnage is quite insufficient to cover overhead and general running expenses, and cutting would not add to tonnage.

Steel ingot production last week was at about 21 per cent of capacity, against 22 per cent estimated for the two preceding weeks and about 26 per cent as the February average. Present rating of capacity is in a sense fictitious, as production in the biggest year, 1929, was only 78 per cent of the present enlarged capacity, and no small part of present capacity is marked for eventual abandonment as being slightly obsolete. Rough estimates are made that with a 45 or 50 per cent operation the steel industry would avoid losses and per-

haps have a little real profit by reason of the strict economies being practiced.

## Metals Remain at Low Levels

New York, April 18—[Special.]—Though the general average price for commodities in general has been rising during the past two weeks, the metals have been a dragging influence on this composite price. Tin dipped to 18½¢ per pound, the lowest point since 1898; silver sold at under 28 cents per ounce on Thursday which is a new low for this year. Tin, copper and silver dipped to new all-time lows on the National Metal Exchange.

However the actual metals of copper, lead and zinc hold unchanged in price, giving a remarkable exhibition of stability in the face of a declining stock market. The St. Joseph Lead Company has announced that effective May 1 it will shut down its smelter at Herculaneum, Mo., thereby causing a monthly curtailment of lead production of 3000 to 4000 tons monthly. Thus steps are still being taken to curb the excessive supplies of the metals.

Further curtailment in zinc production is being carried on. In the case of copper, lead and zinc, surplus stocks are probably declining for the first time in several months though the full force of the drop may not be realized until the May statistics are issued. Lead has again been the most active metal from the standpoint of sales, most producers having sold their production for the week.

Steel operations are declining gradually, the current rate being 21 per cent of capacity. Word from Birmingham, however, is to the effect that, starting today, steel operations will be at the rate of 50 per cent of capacity as against 21 per cent last week, due to the restarting of several mills of the Tennessee Coal, Iron & Railroad Co. The 300,000 cars sold by Ford already will account for the use of 250,000 tons of steel and a large quantity of non-ferrous metals.

Export sales of copper have ranged from 300 to 500 tons daily. Export sales so far this month have been 5000 tons, which is regarded as extremely light. However American producers are confident that foreign users are considerably underbought for their April and May needs and it is expected therefore that a revival of foreign purchasing must take place soon.

An unsettling influence on the copper market has been the matter of a duty on

copper. Agitators for such a duty have been very active during the past week. Governors of twelve copper producing states sent a petition to President Hoover urging a duty, this being a subject with which the President is particularly familiar since he was formerly a mining engineer. Opinion is divided as to whether such a duty will eventually pass.

Lead business has been the most consistently good among the metals, producers usually selling the equivalent of their production each day. Makers of pigments and batteries have been the principal purchasers; makers of lead foil have also been active; in fact no line of lead consumption has been dormant.

Despite the bargain prices in tin, consumers have not been interested. Tin consumption in the United States is increasing steadily. Tin plate production has reached 48 per cent of capacity as against 40 per cent at the start of April. Consumption in the automobile industry is also gaining.

The outstanding feature of zinc is its steadiness of price, being unchanged at 2.80¢ per pound, East St. Louis, in the face of extremely dull demand. The ore price is the same at \$17 per ton.

## Some Improvement Evidenced

Birmingham, April 18—[Special.]—Hope for the turn for the better in general conditions, especially in industrial lines, is nearing realization, the present week seeing some tangible evidences of improvement. Resumption of operations though on partial schedule and for a limited period of the Ensley Works of the Tennessee Coal, Iron & Railroad Company, including rail mill, five open hearth furnaces and two blast furnaces, carrying with this ore and coal mines and an increased output of coke, has aroused much interest. The authoritative statement is that business in hand does not give any great amount of encouragement but the fact there has been resumption of operations is in itself felt as having meaning. More than 1000 men will be directly benefited by this new turn. In the meantime there is belief that new business will be coming in which will keep the mills going for some time to come.

Structural steel fabricators have bids out on a number of projects in the building line, with several government buildings proposed. Cement producers are starting up mills, with prospects of enjoying demand by reason of road build-

ing thro  
tion wo

Anno

ment loc

Phillips

and con

distant

ment st

to be u

expecte

of down

will be

and bri

vestmen

Sever

pressur

the for

called f

Pig i

been ab

blast fu

one on

at Ensl

being s

foundry

keen co

ported

here be

furnace

The c

tion is

of norm

quotati

improve

pendent

Rockw

Russe

bama S

Russell

biggest

general

supply

Liberty

burgh,

Rockwo

stone u

tol at I

Ster

Rich

ericksb

the Vir

of Arch

The ch

lows:

preside

burg, s

Richm

oke, di

and W

named

vention

Wright

Blackst

nates.

ing throughout the South and construction work in general.

Announcement by one of the prominent local department stores, the Burger-Phillips Co., that plans are being drawn and construction work is to start at no distant date on a five-story and basement structure in the heart of the city, to be used for a retail establishment, is expected to start something in the way of down-town building. The structure will be of steel frame, concrete and stone and brick construction, involving an investment of more than \$1,000,000.

Several specifications for cast iron pressure pipe are said to have come to the fore recently and bids are being called for.

Pig iron production heretofore has been about equal to the demand, three blast furnaces producing foundry, with one on basic. The two furnaces started at Ensley this week will be on basic, one being switched from time to time to foundry. Base price of pig iron, despite keen competition in the East from imported iron, is being maintained, sales here being on the \$10 and \$11 f. o. b. furnace level.

The coal industry lags. Coke production is being held down to 50 per cent of normal. There are no changes in quotations on iron and steel scrap, any improvement in old material being dependent on the iron market.

### Rockwood-Alabama Stone Order

Russellville, Ala.—The Rockwood-Alabama Stone Co., operating quarries near Russellville, recently received one of its biggest orders, according to C. A. Perry, general manager. The company is to supply stone for the interior of the East Liberty Presbyterian Church at Pittsburgh, Pa. The stone will be of the Rockwood golden buff type, similar to stone used in the Louisiana State Capitol at Baton Rouge.

### Stern Heads Architect Group

Richmond, Va.—Philip N. Stern, Fredericksburg, was reelected president of the Virginia Chapter, American Institute of Architects, at its annual meeting here. The chapter named other officers as follows: Samuel J. Collins, Staunton, vice-president; Pendleton S. Clark, Lynchburg, secretary-treasurer; C. Merrill Lee, Richmond, and Louis P. Smithey, Roanoke, directors. Mr. Stern, Mr. Collins and W. C. Noland, Richmond, were named as delegates to the national convention at Washington, with Marcellus Wright, Richmond; Clinton Cogwill, Blacksburg, and Mr. Smithey, as alternates.

## Constructive Work for Unemployed

A method of keeping men employed doing necessary work has been devised by William Carroll, street commissioner of East Peoria, Ill. Taking the city's "Caterpillar" Twenty tractor and a small "Caterpillar" road grader, Mr. Carroll went to the banks of Farm Creek which flows across the edge of East Peoria. This creek fills with silt, much of it good road material. With a drag-line and ½-yard Sauerman bucket working from a Willamette-Ersted double-drum mounted on the rear of the tractor,

it was found that one man could dredge enough material from the creek to keep 218 men busy with shovels loading motor trucks and spreading gravel on needed park roadways.

The city of Battle Creek, Mich., offers another example of such constructive work, where the W. K. Kellogg Company, with two "Caterpillars," keeps about 300 men busy tearing down brick buildings, moving trees and doing other work in the development of the Kellogg recreation center.



At  
East Peoria,  
Ill.,  
Where  
Caterpillar  
Equipment  
Helps  
to Keep  
Men  
at  
Work

### Minnesota Ferruginous Manganese Ores Successfully Concentrated

The black ferruginous manganese ores of the Cuyuna district of Minnesota are now successfully concentrated in a plant recently built at Crosby, Minn., states the Bureau of Mines. Formerly these ores, with their relatively high manganese content—10 to 20 per cent—were a waste due to their high silica content. Daily capacity of the mill is approximately 500 tons of concentrates with a tenor of approximately 39 per cent of iron, 18 per cent of manganese, and 10 per cent of silica.

The mill flow sheet is the result of experimental work at the Mississippi Valley Experiment Station of the Bureau, in cooperation with one of the Minnesota mining companies and the Missouri School of Mines and Metallurgy at Rolla, Mo. In general the flow sheet consists of crushing the ore to 5 mesh, classifying and tabling on ten tables; the slimes from the table plant

are treated in a flotation unit for additional recovery of the fine iron and manganese minerals. The ten concentrating tables have demonstrated the large capacity of tables for treating ores of this type, it is stated.

### Community Canning Projects

In commenting on the announcement that community canneries will be established throughout North Carolina this year, the Winston-Salem Journal says the project is interesting not only as a means of furthering the live-at-home campaign, but also as a demonstration of the great possibilities of the canning industry in the state. A wide variety of fruits and vegetables is produced in North Carolina and such products can be used in still greater variety and of course in much greater quantity. Following the drought of 1930, the entire South turned to the growing of more food and feedstuffs for home consumption and the home and community canning industry received a great impetus.



# World-Famous Georgia Marble

By

FRANK E. COFFEE

**L**ONG SWAMP VALLEY, cradled between ranges of the Blue Ridge Mountains in North Georgia, would be just another mountain valley except for two things. One is a barely concealed vein of the world's finest marble; a stone of wondrously beautiful color as changeable in its shades as the colors of a peacock's tail, and of an interlocking texture that makes it as permanent as time. The other reason is the Georgia Marble Company, one of the great Southern industries that meets on more than even terms the competition offered from any point in the world.

In Long Swamp Valley is located the village of Tate and the general offices and principal quarries and plants of the Georgia Marble Company. It is impossible to separate the one from the other; equally impossible to visualize the section, the town or the company without the master hand of Colonel Sam Tate directing its material and altruistic life so ably and so sincerely that in this peaceful and beautiful valley is one of

America's most remarkable industrial organizations.

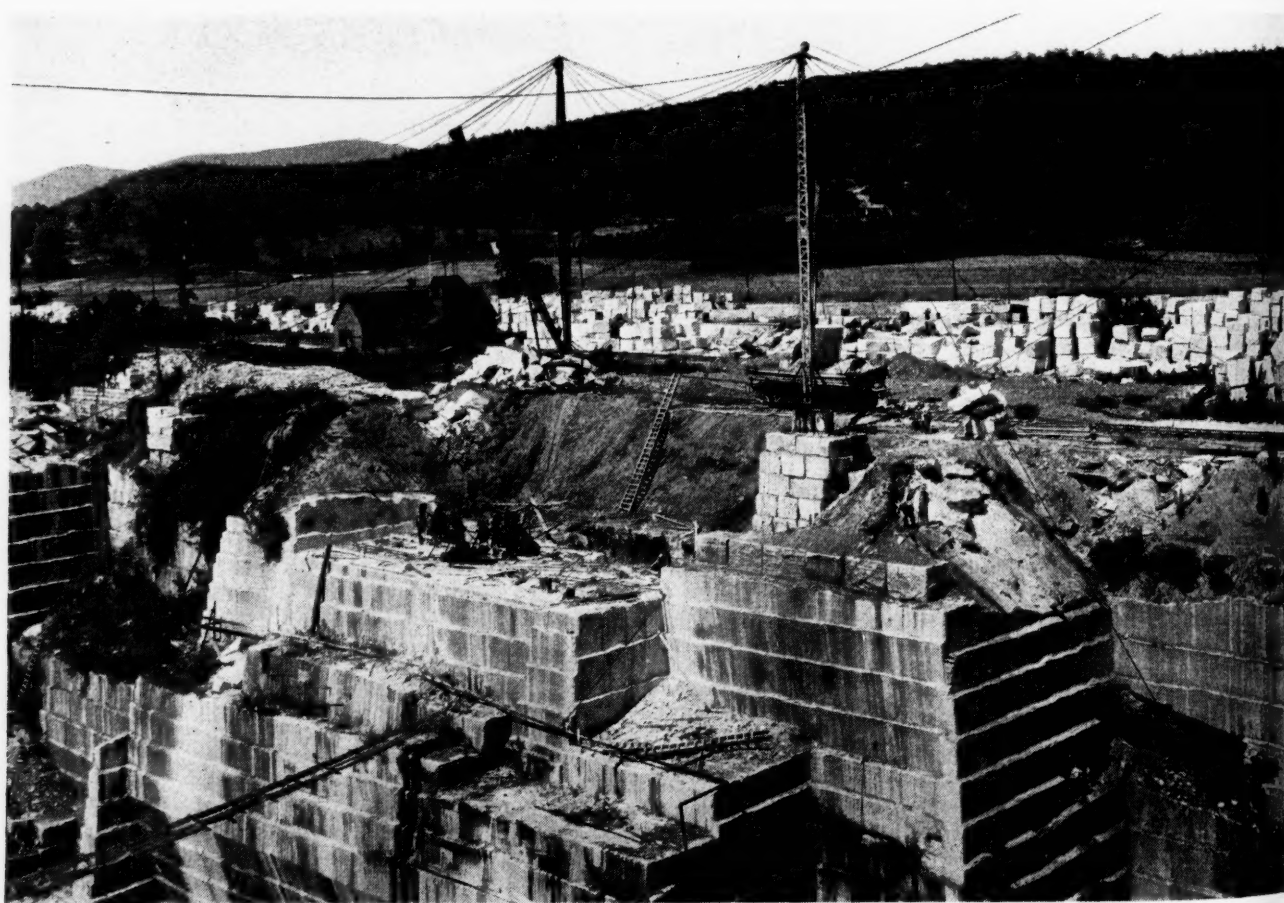
It was in 1835 that Samuel Tate, grand sire of the present Colonel Sam Tate, moved to Pickens county, Georgia, and acquired a tract of 160 acres of land for \$150. Through this land ran a part of a tremendous marble deposit, three-eighths of a mile wide, four miles long and from 200 feet to a half mile deep. The original Samuel Tate, a man of unusual business foresight, quickly realized the commercial value of this great marble deposit.

In 1850 the firm of Tate, Adkinson & Company was formed and a quarry opened not far from where the Georgia Marble Company is now located. As early as 1840, small quarrying operations had been conducted in the neighborhood. Methods were, of course, crude. Out croppings and boulders

were used as there was then no possible way of uncovering the great vein that was later to supply the material from which many of the New World's most beautiful structures were to be built.

But it was not until 1884 that Georgia marble really commenced to come into its own. During that year a group of Northern business men organized the Georgia Marble Company with a capital stock of \$1,000,000, and obtained from Stephen C. Tate, and William Tate, sons of the original Samuel Tate, long-time leases on the lands owned by the Tate estate and purchased several hundred additional acres. The company's operations were confined to the quarrying and sawing of the marble, the finishing being done by other companies that also undertook to find a market for the finished product.

After a time it appeared that the real strength of Georgia marble was to become its weakness. The crystalline formation of this marble causes an actual interlocking of the grains of the stone.



From This Quarry in the Long Swamp Valley of Georgia to the World's Notable Architectural Structures

It is t  
its ex  
guishes  
ble an  
thing  
and b  
hardne  
many  
sidered  
the co  
years.  
compa  
had b  
presen  
Steph  
est in  
Colo  
Swamp  
marble  
compa  
he kn  
above  
door a  
labor  
sults  
Mou  
people  
and a  
blood  
recogn  
the d  
scien  
nize a  
pels a  
ness h  
no lon  
just t  
ly ill  
the G  
emplo  
made  
when  
ting v  
"We  
dime,  
cut it  
the o  
here  
We h  
marke  
puts  
marke  
plants  
tion o  
fallin  
time  
get it  
The  
little  
partn  
Wage  
finish  
cent  
Int  
their  
sense  
strong  
fitted  
to de  
own



It is this that gives to Georgia marble its exceptional hardness and distinguishes it from all other American marble and makes it as permanent as anything can be. But early day architects and builders were afraid of its super-hardness, just as they were afraid of many of the things that are today considered most desirable. The officers of the company were getting well along in years. For these and other reasons the company did not realize the profits that had been anticipated, and in 1905 the present Colonel Sam Tate, son of Stephen C., acquired a controlling interest in the company.

Colonel Tate had lived his life in Long Swamp Valley. He had cut his teeth on marble. He knew where the original companies had made their mistakes and he knew how to correct them. But above all he knew that he had at his door an ample supply of the world's best labor and he knew how to get best results from this exceptional labor supply.

Mountain people are not a submissive people. They are independent in thought and action. Of the purest Anglo-Saxon blood to be found in all America they recognize no superior, no master except the dictates of their individual conscience. But in Colonel Tate they recognize a man whose rugged honesty compels admiration and whose absolute fairness has been so often proven that it is no longer a subject of comment. It is just taken as a matter of course. Fairly illustrative of the relations between the Georgia Marble Company and its employees is the statement Colonel Tate made to them during the past summer when so many organizations were cutting wages and laying off employees.

"We don't intend to cut your wages a dime," he told them. "If your wages are cut it will be because you cut them. But the only way even you can cut wages here is to get just a bit lazy on the job. We have the marble here and there is a market for it. If the sales department puts on just a little more pressure, that market will be found. If quarries and plants work just a little harder, production costs can be cut enough to meet a falling selling price. So if you want full time work at full pay you know how to get it."

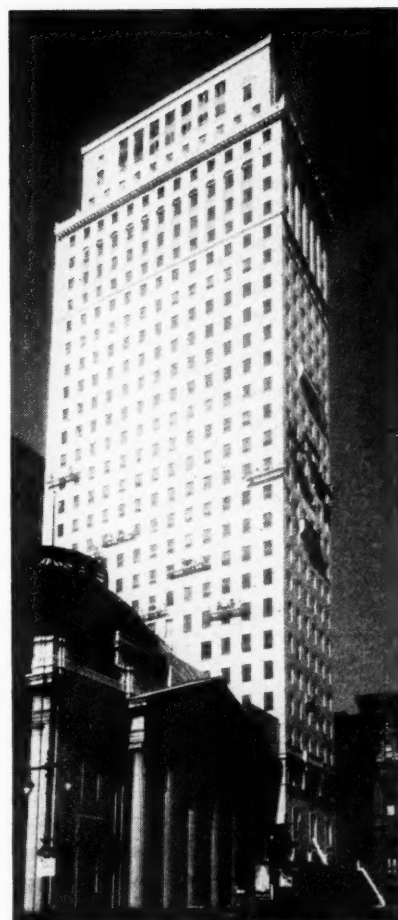
The sales department did put on a little extra steam. The production departments did make every minute count. Wages were not cut and every employee finished the year with at least 95 per cent full time.

Intelligent, proud with a knowledge of their own strength, and with an inherent sense of right and wrong that is as strong as life itself, these mountain folk fitted perfectly into Colonel Tate's plan to develop Long Swamp Valley with its own resources and with its own people

for his and their benefit. Today almost every employee, including officers and executives, was born and has lived his life within walking distance of the offices of the Georgia Marble Company. It was this accurate knowledge of his own people that made the young Georgian believe he could succeed where older and more experienced business men had failed.

One of his first important steps was the formation of a single company to quarry, manufacture and sell. Accordingly, first one company and then another was purchased and combined with the Georgia Marble Company. By 1917 the various finishing companies in the neighborhood were acquired and merged into a complete unit so that the Georgia Marble Company, as we know it today, takes the marble from the quarries, finishes it, sells it, transports it and places it into structures where, unless it is purposely removed, it will stand throughout the ages. Not only will it stand but succeeding years will mellow its original beauty and accentuate a coloring so delicate that it might have come from the brush of Titian: while the black and white marble could well have served as models for Rembrandt, that unquestioned master of light and shade. Could Georgia marble be cut up into lines as delicate as the stroke of an artist's brush many of the masterpieces could be reproduced from it; the coloring and the shades are there.

Absolutely sure of himself, his associates, and his product Colonel Tate proceeded to broaden the scope of his operations. Quarry after quarry was opened and developed. New market after new market was found. Georgia marble was no longer used exclusively for tombstones, although even today a tremendous business is done in that line. But new and improved methods of quarrying and manufacturing were installed and Georgia marble commenced to take its proper place in the great buildings of the world. No other building stone has been used in so many buildings and monuments of the first class. The foremost architects are giving it preference. It is in the New York Stock Exchange, both in the original building and in the addition; in the Utah State Capitol. It is in the Pan-American Building at Washington. Out of it is built the McKinley Memorial at Niles, Ohio; the statue of Lincoln and the Columbus Memorial Fountain at Washington. It was selected for the world-famed Ford Museum, at Detroit; and for Federal Reserve Bank buildings at Atlanta, Cleveland, Pittsburgh, Detroit and St. Paul. Even Italy, for centuries regarded as the source of the world's finest marble, is using Georgia marble in the construction of the Piave War Memorial on Pincian Hill in Rome. There is, indeed, no important city where one cannot find



Ample in Volume and Uniform in Quality for Large Structures

Georgia marble in one or more of the principal buildings.

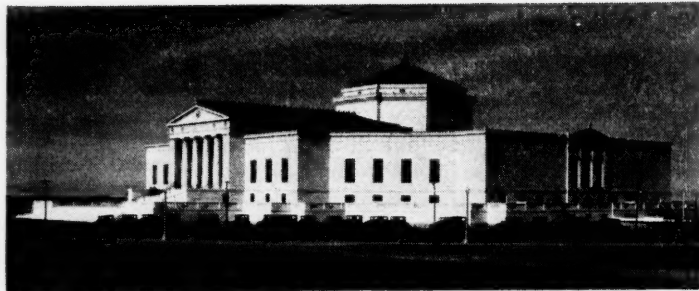
Sales offices were established in Atlanta, Chicago, New York, Cleveland and Dallas. Finishing plants were built at Nelson and Marietta, the former just a few miles from Tate and the latter just a short hour's drive. The Georgia Marble Company had taken its rightful place in the forefront of Southern industry. Indeed, it is in the forefront of American industry. And today it is truly a Georgia industry. It is financed by Georgia money, it owes no bank a dollar. Its raw material is taken from beneath Georgia soil. Its principal executives and the great majority of its employees are Georgians. It has helped to make Georgia what Georgians call the "Empire State of the South."

It is difficult to pick out any one or two reasons why this little marble quarrying community in the hills of Georgia should be so prosperous when almost every industry is so seriously handicapped by general depression. There is, of course, this inexhaustible supply of marble lying so close to the surface that it takes no prospecting to find it. There is the fact that each quarry runs absolutely true to form. Georgia marble is known by the trade names of "Etowah," "Amicalola," "Cherokee," "Creole,"

"Kennesaw," "Mezzotint," and "Silver Gray." Each is of an entirely different color or shade. But they do not come from the same quarries. If, when a new quarry is opened, it is found to be "Creole," for instance, it will be of exactly the same shade, color, and texture straight on down. How far down no one knows. Drills have been sunk some 200 feet;

some geologists estimate the depth of the vein to be a half mile. This remarkable condition makes it easily possible for the Georgia Marble Company to fill orders of any size and absolutely true to sample.

The business reputation of the company has also had its part in bringing about the remarkably consistent business it has enjoyed. There is not the slightest difference between the value of a verbal agreement with the Georgia Marble Company and a written contract guaranteed by bond. And a delivery date agreed upon is a promise that must be kept. When the new House of Representatives building was built in Washington, Georgia marble was ready 90 days ahead of time. When the builders of the Girard Trust Company building at Philadelphia were ready for the marble, they found it ready and waiting. And it was exactly according to specifications. Every piece was finished to the specified size. It was of the stipulated color. It was right. These two



Georgia Marble Meets the Architect's Dream

instances have been duplicated time after time in every state. And builders know that delays are expensive, especially on a material like marble that cannot be duplicated or replaced without great expense if the original shipment is not just exactly right.

But to the close observer it is apparent that the dominating reason for the success of the Georgia Marble Company is the relationship between the officers and employes of the company. There are about 1200 of these employes. Most of them live at Tate, an unincorporated town where there are no taxes, except state and county. Lights are furnished without charge. Most of the houses are modern with modern plumbing and free water. Rents range from \$3 to \$12 a month. The schools are free; and speaking of schools, don't get the idea that the schools in Tate don't rate with the schools of Atlanta or any other city large or small. The Tate High School is fully accredited; a distinction no other Georgia high school in a town the size

of Tate enjoys. There is what would, in a large town, be called a city auditorium. It is big enough for basket ball and other games. The Tate baseball team, year in and year out, is about the best amateur baseball team in Georgia. There is in Tate every form of clean, wholesome amusement. And if you are not clean and wholesome you have no business

in Long Swamp Valley. And just incidentally, the schools, auditorium, baseball, basket ball and everything that goes to make up the community life is paid for by the Georgia Marble Company, or by Colonel Tate. Group insurance is provided at a cost of seventy cents per thousand dollars. Sick benefits are available at a cost that is less than paid in other communities.

What has made Long Swamp Valley an ideal community?

Why is it not just another mountain valley?

A vein of marble, did you say?

The marble is there, all right. And it has been a tremendous asset. But in more than one community there are assets that could and should have been turned into community happiness. But these communities lacked the human element personified by Colonel Sam Tate—not just employer, but friend to every man, woman and child whose path crosses his.

(Advertisement)



Georgia Marble Most Admirably Adapted to Verdant Settings of Trees and Shrubbery



# NEW AND IMPROVED EQUIPMENT

## Drum and Capstan Car-Puller

The Fridy Hoist & Machinery Company, Mountville, Pa., has introduced a new combination type of Drum and Capstan Car-Puller for "spotting" a train of loaded railroad cars in either direction and at slow rope speed. This is said to have greatly simplified the handling of cars in yards and at warehouse platforms. With this car-puller, one man has complete control of all car replacements. For handling long hauls of 900 feet and under, steel cable is used on the drum, and for shorter hauls, less than 300 feet, the capstan may be used to advantage with manila rope. Superseding a former type which has been on the market for 12 years, this new car-puller is furnished in 7½, 10, 15 and 20 horsepower ratings for spotting a train

over with refractory of suitable conductivity and thickness to give the desired rate of heat transfer and close the spaces between the tubes to make an airtight wall. "Flexibility of shape" is a distinctive feature of Bailey Stud Tube construction, as tubes may be bent to any desired radius.

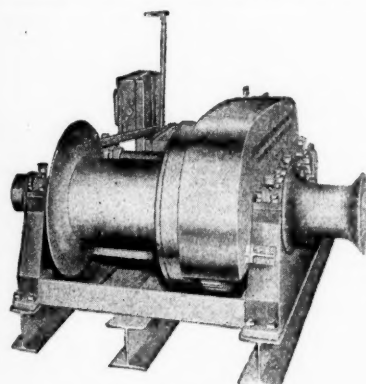
## Piston-Type Dry Seal Gas Holder

A new type of gas holder introduced from Germany was completed recently for the Syracuse Lighting Company, at Syracuse, N. Y., by the Stacey Brothers Gas Construction Company, Cincinnati, Ohio. It is a 6,000,000-cubic foot, Stacey Klonne piston-type dry-seal gas holder. Since the building of the first holder of this type in 1927, 45 such holders with an aggregate capacity of about 50,000,000 cubic feet have been built. Exclusive rights for manufacture of the holders in this country are held by the Stacey Brothers organization, which is constructing a 4,000,000-foot holder for the Consumers Gas Company, Reading.

holder shell, and affording unrestricted freedom for the piston guide rollers.

The seal or packing ring consists of an expansible, dilatable sheet steel ring suspended from the structural framework of the piston, to which is attached a specially prepared gas-resisting packing made up of seven layers of cotton fabric vulcanized with a gas-resisting compound and faced with leather on the lower side where it comes in contact with the gas. A special grease is used to lubricate the packing as it is pressed firmly against the holder shell by means of closely-spaced counterweight lever arms. The lower edge of this expansible sealing ring is connected to the outer edge of the piston structure by a strip of sheet lead covered with fabric, forming a gas-tight, flexible connection. The lubricant can be used the year round without heat or other special treatment, it is said.

The Syracuse holder is 188 feet in diameter, 251 feet high to the top of the shell, and is covered with a spherical roof on the center of which is built a 20-foot diameter dome. The exterior of the holder is supplied with a stairway and electric elevator. Access to the piston is provided by means of an electrically-operated lift suspended from the dome in the center of the roof, and in addition by a double-chain folding ladder.

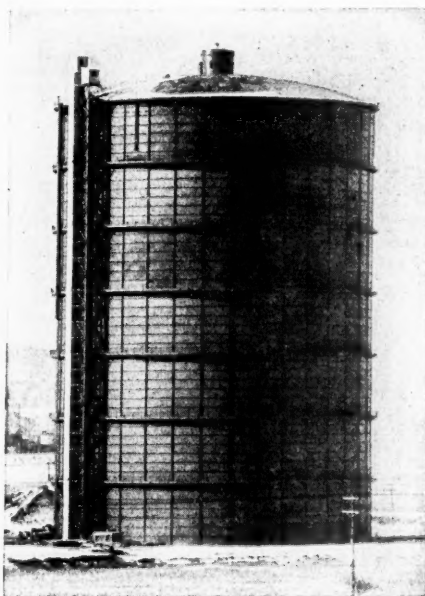


Of Friction Clutch Type

of 500 tons and under. Special features include a double V-shape friction clutch, asbestos lined, and a steel triple spur gear drive enclosed in an iron housing. The complete unit is mounted on a steel I-beam sub-base.

## Stud Tube Furnace Wall

The Babcock & Wilcox Company, New York, announce the development of a new water-cooled furnace wall construction, designated as the Bailey Stud Tube Wall. While the wall is said to possess many novel features, the manufacturers especially stress the economic importance of Stud Tube construction, which will greatly extend the range of conditions to which the Bailey Water-Cooled Furnace may now be applied, it is declared. The lower portion of the wall is completely coated for use in hotter portions of the furnace and those zones receiving severe punishment. Wall construction consists of water-cooling tubes spaced in the usual manner, with iron studs welded to the tubes and plastered



Has Capacity of 6,000,000 Cubic Feet

Pa., and a 1,500,000-foot holder for the Consumers Power Company, Kalamazoo, Mich.

No water or other liquids are used in the seal, a dry mechanical seal being employed between piston and holder shell, and the cross section is a circle rather than a polygon, making it possible, it is pointed out, for the piston to turn or twist without binding as it travels up and down the interior of the

## Non-Resilient Electrographitic Brush

The National Carbon Company, Inc., Carbon Sales Division, Cleveland, Ohio, recently announced a new electrographitic brush known as National Pyramid Grade No. 234, a characteristic being a non-resilient structure which enables the brush to maintain firm contact on commutators of high peripheral speed. It is stated that excellent commutation, low friction and high carrying capacity combine with smooth riding properties to minimize brush wear and commutator maintenance. The field of application of this new grade is in heavy duty direct-current generating and substation equipment.

## Unit \$5,000,000 Auditorium

St. Louis, Mo.—Bids will be opened May 17 by the Board of Public Service, E. P. Kinsey, president, for the construction of the first unit of a \$5,000,000 7-story Municipal Auditorium.



# CONSTRUCTION DEPARTMENT

## and

# NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

### Airports, Airplane Plants, Etc.

Ky., Smiths Grove—Dept. of Commerce, Div. of Purchases and Sales, W. S. Erwin, Ch. of Division, Washington, D. C., receives bids April 21 (change of date) for reconstructing boundary lighting system Smiths Grove, No. 71, Nashville-Louisville Section of Dallas-Louisville Airway. 4-7

La., New Orleans—Comms. of Orleans Levee District, 606 Common St., let contract for Items, 1, 2, 3 and 4 at Shushan Airport on Lake Pontchartrain, to Caldwell Brothers, 816 N. Howard Ave., at \$408,783; contract includes repair shop building, 102x122 ft., 2-story, brick administration bldg. and tower approximately 290x70 ft., and transformer building, emergency and storage building 127x60 ft. and 2 hangars each 197x125 ft.; National Airport Engineering Co., Los Angeles, Calif., and 606 Common St., New Orleans, Archt.; John Klorer, Ch. Engr., Levee Bd. 4-14

Mo., Columbia—City voted to lease Alton field, north edge of city; will improve.

Okla., Blackwell—City, C. A. Stoldt, City Engr., will rebuild with city forces burned hangar; 90x100 ft.; brick and conc.; conc. floors; steel trussed roof; cost \$11,000. 4-14

Texas—See Want Section—Bids Asked.

Tex., Dallas—Fuller Construction Co., Republic Bank Bldg., Dallas, reported, low bidder at \$29,800 for construction of beacon towers and other equipment for night flying on Dallas-Meridian section of Southern Transcontinental Airline which passes through Shreveport, for Aeronautics Branch of Dept. of Commerce, Washington. 3-31

Tex., San Marcos—M. G. Tally, San Marcos, reported, has contract for woven wire fence around San Marcos Government Airport 2 miles east of town; Kempton Withers, Airways Engr., Fort Worth.

### Bridges, Culverts and Viaducts

#### Proposed Construction

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids April 26 for 2 bridges in following counties:

Cecil—struc. steel superstructure (single 94 ft. 6 in. span pony truss) for bridge over Little Elk Creek, road from Elkton to Childs. Ce-83-1-22;

Washington—sidewalk extension for existing arch bridge over Great Tonoloway Creek at west end of Hancock.

Mississippi—State Highway Comsn., C. M. Williamson, Dir., Jackson, plans new and wider bridge over canal in Henderson Point, Highway 90.

Miss., Columbus—Lowndes County Supvrs., H. L. Bailey, Clk., open bids May 2 for bridges and culverts: Extensions to 4 conc. culverts, Wolf road, Dist. 1, Black Creek Bottom; extension to conc. culvert, Honnoll and Freeman road, Dist. 1; creosote pile and timber bridge, Mustin Creek, Nashville Ferry road, Dist. 3.

Mo., Kansas City—Missouri Public Service Comsn., Jefferson City, ordered Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, and State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, to build viaduct over tracks near Elm Park.

North Carolina—State Highway Comsn., Leslie R. Ames, Highway Engr., State Dept.

of Conservation and Development, both Raleigh, investigating feasibility of bridging new inlet in Dare County made by storm.

Oklahoma—State Highway Comsn. receives bids for 2 bridge projects. See Roads, Streets and Paving.

Tennessee—State Dept. of Highways & Public Works has low bids for 2 bridges. See Roads, Streets and Paving.

Tenn., Nashville—City, Bd. of Public Works, Hilary E. Howse, Mayor, authorized bridge on McFerrin Ave. over Edgefield Branch, Carter Ave., and repairing bridge, W. Greenwood Ave., over Edgefield Branch.

Texas—State Highway Comsn., G. G. Wickline, Bridge Engr., Austin, authorized preliminary survey for bridge over Intracoastal Canal between Galveston and Chambers Counties east of High Island, Highway 125, Galveston-Beaumont road; plans will probably be drawn within few months and submitted to War Dept., Washington, for approval.

Texas—State Highway Comsn., G. G. Wickline, Bridge Engr., Austin, probably call for bids soon for 3 bridges over Kiowa, Darrosett and Ivanhoe Creeks, steel I-beam spans, conc. floor, treated timber pile trestle substructure, 22-ft. roadway, Highway 117, SAP 797-D, \$75,000.

Texas—State Highway Comsn. receives bids for 3 bridges. See Roads, Streets and Paving.

Va., Richmond—City, R. Keith Compton, Dir., Dept. of Public Works, City Hall, expend \$17,000 repairing floor of Ninth St. bridge and strengthening parts of superstructure during summer.

#### Contracts Awarded

La., Natchitoches—Bay Construction Co., Mobile, Ala., has sub-contract for superstructure of bridge of State Highway Comsn. over Cane River, Natchitoches-Alexandria Highway, Natchitoches County; Royce-Kershaw, Inc., Gen. Contr., Mobile, Ala. 7-9-31

Miss., Columbus—Lowndes County Supvrs., A. M. Loftis, Pres., let contracts: bridge over Jim Creek, Dist. 4, and bridge, Waverly Road, Dist. 2, Ellis & Ellis; bridge, Dist. 4, D. S. McClanahan & Son.

Mo., Kansas City—See Roads, Streets and Paving.

### Canning and Packing Plants

Fla., Bradenton—Manatee County Growers Assn., S. W. Strickland, Pres., 12th St., will erect, under own supervision, new plant with daily capacity 5 cars vegetables, 65x150 ft., frame, sheet metal, wood floors, sheet metal roof; cost of building \$12,500; of equipment, \$5,000; will install vegetable packing equipment. 4-14

### Clayworking Plants

S. C., New Brookland—Guignard Brick Works, reported, plans replacing burned kiln unit.

### Coal Mines and Coke Ovens

Va., Blackwood—Blackwood Coal and Coke Co., reported, let contract to Fairmont Mining Machinery Co., Fairmont, W. Va., for complete crusher unit: Coal crusher, conveyor equipment and screen; will screen and crush 300 tons coal an hour.

West Virginia—Raine Lumber Co., J. W. Raine, Treas., Alderson, will develop coal land in Greenbrier County; actual equipment to be installed not determined. 4-14

### Cotton Compresses and Gins

La., Hall Summit—T. L. Hanna, reported, rebuilding burned cotton gin; steel and conc.

### Drainage, Dredging and Irrigation

Louisiana—Bd. of State Engrs., 207 New Orleans Court Bldg., New Orleans, let contract for 245,000 cu. yd. earthwork, emergency levee projects: Cleaning Bayou Boeuf, Red River, Rapides Parish, Atchafalaya and Bayou Boeuf Levee Dist., approx. 190,000 cu. yd., J. P. Babcock, Paris, Ill., 6.47 cents per cu. yd.; drainage ditches, Melville south, on Red River, St. Landry Parish, Atchafalaya and Bayou Boeuf Levee Dist., approx. 6000 cu. yd., W. P. Morgan, Port Allen, La., 40 cents per cu. yd.; Bordelouville West Levee Drainage, Red River, Avoyelles Parish, Bayou des Glaisses Levee & Drainage Dist., 49,000 cu. yd., A. N. Goldberg, Louisiana Bldg., New Orleans, 6.7 cents. 4-7

North Carolina—South Carolina—War Dept., Washington, allotted \$110,000 for further dredging in Intracoastal Waterway, Cape Fear River, N. C., to Winyah Bay, S. C.; U. S. Engr. Office, Wilmington, N. C., in charge.

### Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ark., Elaine—Elaine Utilities Co., Inc., Harvey H. Thompson, Pres., completing power, ice and water works plant; 60x30 ft.; conc. and iron; built-up roof; install 100-h.p. Diesel engine, 10-ton York ice plant; equipment purchased; J. R. David, Const. Engr. 4-11

D. C., Washington—Combustion Engineering Corp., 200 Madison Ave., New York, announces receipt of contract from U. S. Treasury Dept., for four 2500 h. p. Walsh-Weldner sectional header boilers and 4 C-E multiple retort stokers, super station type, equipment to be installed in new Triangle heating plant, which will provide heat for various buildings included in Federal building development; in addition to boilers and stokers, contract includes steel encased boiler settings, water-cooled furnaces and forced and induced draft fans and drives; boilers designed for 400 lb. pressure, guaranteed for production of 215,000 lb. of steam an hour continuous and 237,000 lb. maximum, from and at 212 degrees F.; stokers will be 15 retorts wide, 45 tapers long, and will have aggregate area of 480 sq. ft. each, equipped with double-roll elker grinders; United Engineers and Constructors, Inc., 112 N. Broad St., Philadelphia, Pa., are consulting engineers for heating plant. 4-7

Ky., Smiths Grove—See Electric Light and Power.

Ky., Louisa—City, R. C. Burton, soon grant new electric franchise.

Okl., Oklahoma City—Oklahoma Gas & Electric Co., reported, plans power duct system for Harvey, Robinson and Hudson Sts.; cost \$25,000.

Okl., Shawnee—City voted renewal of 25-yr. electric franchise to Oklahoma Gas & Electric Co., Oklahoma City. 2-25

S. C., Fort Moultrie, Charleston—War Dept., office of Q. M. Fort Moultrie. See Want Section—Bids Asked.

S. C., Laurens—Southern Public Utilities Co., Charlotte, N. C., reported, acquired plant of National Utilities Co. of South Carolina at Laurens.

Va., Winchester—D. C. Stultz, Res. Mgr. of Northern Virginia Power Co., a subsidiary of Potomac Edison Co., Frederick, Md., reported, construct 33,000 volt electric transmission line from Martinsburg, W. Va., to Winchester; cost \$135,000.

### Flour, Feed and Meal Mills

Va., Middletown—Middletown Milling Co., incorporated; M. H. Rhodes, E. M. Funk.

### Foundry and Machine Plants

Ga., Atlanta—Arlington Paint & Varnish Co., Cartersville, remove plant to 154 Walter St., Atlanta, as part of expansion program.

Mo., Afton—Schubert-Christy Corp., F. H. Schubert, reported, take over and expand Standard Power Equipment Corp., manufacturers of power plant equipment, cooling towers, heating and ventilating equipment. 3-17

Mo., St. Louis—Airtherm Mfg. Co., R. J. Tenkonohy, 1474 S. Vandeventer Ave., organized to succeed Skinner Bros. Mfg. Co., for production of heater units, ventilating machinery, etc. 3-24

Mo., St. Louis—Beck Engineering Co., V. S. Beck, Pres., 4525 N. Euclid Ave., formerly of Winfield, Kans., reported, organized to manufacture "Ovaltube" low pressure gas burner; manufacture 5 types of conventional burners as well as several new burners under new patents; arrangements made with Langenberg Mfg. Co. for foundry and machine work and with Hoeftin Pattern Works for all pattern work.

### Garages and Filling Stations

Fla., Coral Gables, Miami—Coral Gables Motor Co., Inc., chartered; J. C. Sullivan, Ingraham Bldg., Miami.

Fla., Fort Pierce—Atlantic Refining Co., reported, erect storage plant foot of Florida Ave.; erect 2 tanks of 14,000 and 18,000 gal. capacity.

Fla., Miami—Stevens Tire Co., incorporated; R. A. Johnston, 4213 Sheridan Ave., Miami Beach.

Fla., Miami—Motor Sales and Service, Inc., chartered; E. C. Jones, 1124 Aslandia Ave., Coral Gables.

Md., Baltimore—Hamilton Motors, 5417 Harford Rd., chartered; Harry L. French, Jr., Pikesville.

Md., Baltimore—Lord Baltimore Filling Stations, Inc., T. J. O'Connell, American Bldg., Constr. Engr., will receive bids about April 25 for filling station alteration and addition 1132-38 Cathedral St.; revising plans. 4-7

Md., Baltimore—Forest Park Garage Co., 4111 Forest Park Ave., has contract for garage 509 Sharp St. for Manuel Levin, 515 S. Sharp St.

Md., Baltimore—Marriott Properties, Inc., reported, leased site N. W. Cor. Park Circle and Druid Park Drive, erect building for luncheon service and drive in filling station.

Md., Frederick—Albaugh Chevrolet Sales, Inc., chartered; A. Ridgeley Albaugh, H. Kieffer Delauter.

Miss., Gulfport—Gulfport Chevrolet Co., capital \$15,000, incorporated; J. J. Harry, Jr., W. B. Hunter.

Mo., St. Louis—Hewette-Nolte Motors, Inc., 4341 Warne St., chartered; Dudley M. Hewette, 3740a S. Spring St.

N. C., Winston-Salem—Twin City Motor Co., capital \$100,000, incorporated; F. J. DeTamble, Club Park Rd.

Okl., Wynnewood—Lea Chevrolet Co., incorporated; Coleman C. Lee, W. S. Ward.

S. C., Laurens—Moore-Young Motor Co., incorporated; W. R. Moore.

S. C., New Brookland—Brookland Motor Co., Inc., chartered; W. W. Lorick, Clifton D. Lorick.

Tex., Dallas—Perry Motor Co. incorporated; E. Gordon Perry, 4327 Rawlins St.

Tex., Houston—Bonner-Howard Motor Co., incorporated; B. F. Bonner, First Natl. Bank Bldg.

Va., Alexandria—Rosslyn Steel & Cement Co., 3031 K St., N.W., Washington, D. C., reported, has contract for 256 tons of rein. steel for Ford Motor Co.'s assembly plant; Albert Kahn, Inc., Archts. and Engrs., Marquette Bldg., Detroit, Mich.; Worden-Allen Co., 208 S. LaSalle St., Chicago, Ill., Gen. Contr. 4-7

Va., Richmond—Luther Moon, reported, plans erecting filling station W. Franklin St.

### Gas and Oil Enterprises

Ala., Birmingham—P. O. Ensley—Birmingham Boiler & Engineering Co., W. N. Johnson, Pres.-Treas., 815 N. 41st St., Birmingham, closed contract with General Oil Co. for erecting 2 field storage tanks at Birmingham; 500,000 gal. storage.

Ky., Glasgow—Kentucky Producing Co., capital \$200,000, incorporated; J. A. Barrett, Paul D. Bushong.

La., Denham Springs—General Engineering & Management Corp., B. A. Campbell, Atty., reported, submitted proposal for gas franchise; natural gas to be supplied by Jan. 1, 1933.

Md., Baltimore—General Refining Co., Hubert P. Barton, V. P. and Gen. Mgr., 2106 W. Baltimore Ave., acquired acre of land together with plant and buildings, same location; making improvements for processing, blending, etc.; install machinery.

Miss., Hattiesburg—Moran Gas Co., 1813 Esperson Bldg., Houston, Tex., reported, denied gas franchise. 1-28

Mo., North Kansas City—William Petroleum Corp., capital \$50,000, incorporated; C. F. Hudson, 5820 Harrison St., Kansas City.

Okl., Ardmore—Merger, reported, of Wirt Franklin Petroleum Corp. with Cromwell-Franklin Oil Co. and Virginia Petroleum Co. of Oklahoma; home office Ardmore, with branch in Oklahoma City.

Okl., Shawnee—Western Service Co. of Oklahoma, reported, will be organized with T. F. Murchison, Pres., 10 S. La Salle St., Chicago, Ill.; to take over distribution of gas in Shawnee and assist in re-organization of Western Service Corp.; will use Oklahoma Natural Gas Corp.'s lines for distribution purposes.

Okl., Tahina—H. A. Shellenberger, Muskogee, reported, granted gas franchise.

S. C., Columbia—Super Test Oil Co., 1027 Lady St., incorporated; E. B. Wooten, 2301 Divine St.

Tex., Big Spring—Big Spring Drilling Co., capital \$20,000, incorporated; Robt. T. Piner, Ben Case, W. J. Garrett.

Tex., Dallas—Rabbit Creek Oil Co., chartered; L. C. McBride, S. W. Life Bldg.

Tex., Fort Worth—Farrell & Co., incorporated; J. E. Farrell, Aviation Bldg.

Tex., Houston—National Minerals Corp. incorporated; Grace A. Ward, West Bldg.

Tex., Houston—Duval Corp., incorporated; L. M. Josey, 3250 Delmate Dr.

Tex., Longview—Zenith Corp., incorporated; Roy M. Sundby, Abner D. Swan.

Tex., Longview—United Gas Public Service Co., Rusk Bldg., Houston, has permit for compressor station, 4 units of 165 h. p. each; cost \$60,000. 11-19

Tex., McAllen—Valley Refining Co., James E. Campbell, Sec.-Treas., Wichita Falls, reported, started work on 500 bbl. lubricating refinery; plant will consist at present of skimming plant and blending plant; later will install cracking plant; crude oil from Los Olmos field, 12 miles north of Rio Grande City will be brought to refinery by tank trucks. 3-10

West Virginia—Marrowbone Gas Co., Catlettsburg, Ky., capital \$45,000, incorporated; Walter L. Brown, First Huntington Natl. Bank Bldg., Huntington, W. Va.; drill for oil and gas in Mingo County.

### Ice and Cold-Storage Plants

Fla., Crawfordville—Trabe Woodbury, Havana, erecting ice plant east of State Road No. 10; foundations being laid.

N. C., Charlotte—Carolina Cooler Co., incorporated; D. E. Henderson, Law Bldg.

Tenn., Memphis—Stewart M. Poston, 672 McLean St., and associates, reported, acquired Commercial Storage Co., located in Stratton Station, Broadway and Florida St.

Tex., Sherman—Al C. Beckner, 702 W. Washington St., Sherman, and A. S. Beckner, Dallas, reported, constructing ice plant on W. Houston St.; C. Mayhew and J. A. Ladd, erecting building; will move some machinery from Wolfe City plant.

W. Va., Clarksburg—Thomas Tanner, reported, acquired Kingwood Ice Co.'s plant; plans operating.

### Land Development

Ark., Little Rock—W. D. Cammack, 6100 W. interested in development of golf course on Lincoln Ave. Highway, to be known as Riverside Golf Course; will cover approximately 220 acres; has temporary clubhouse, later erect permanent one; layout designed and will be constructed under direction of H. C. Hackbarth, Golf Archt., 2312 N. Beach St.; cost about \$25,000.

Fla., Fort Pierce—Sagamore Groves, Inc., chartered; W. R. Moses, M. Dunn.

Fla., Howey-in-the Hills—Orange Belt Securities Co., incorporated; W. J. Howey, M. G. Howey, C. M. Pinkerton.

Fla., Jacksonville—Main & Eighth, Inc., L. Finkelstein, 2505 Forbes St.

Fla., Jacksonville—Ocean Finance Co., incorporated; F. D. Fant, 2264 Post St.

Fla., Lake Wales—Ridge Citrus Sales Corp., incorporated; M. W. Coate, G. W. Oliver.

Fla., Pensacola—American Tung Tree Development Co., incorporated; E. H. Marhoefer, 1 N. La Salle St., Chicago, Ill.

Fla., Pinecastle—Poinsetta Farms, Inc., chartered; K. C. Smith, D. B. Smith.

Fla., Jacksonville—Chester Property Corp., incorporated; Leonard Finkelstein, 2505 Forbes St.

Fla., West Palm Beach—Testdem, Inc. chartered; W. W. Foskett, Guaranty Bldg.

Ga., Atlanta—Majestic Corp., J. Bulow Campbell, 2958 Andrews Dr., N. W., and C. H. Girardeau, 751 St. Charles Ave., N. E., reported, acquired 750 acres land adjoining Avondale, develop subdivision.

La., New Orleans—Smith-Yantis Realty Co., Inc., chartered; N. P. Yantis, Claude H. Smith.

Md., Chevy Chase—Montrose Land Co., Inc., chartered; Robt. H. Winn, Chevy Chase; Robt. H. McNeill, Investment Bldg., Washington, D. C.

Md., Hancock—Octagon Fruit Farms, Inc., chartered; Stanley M. Fulton, L. J. Fulton.

Mo., Clayton, St. Louis—Mississippi Valley Farm Service Co., incorporated; Robt. N. Hawes, Boatmen Bank Bldg., St. Louis.

Mo., St. Louis—Glueck Realty Co., capital \$210,000, incorporated; Jerome J. Stedelin, 1138a Moreland Dr.

Mo., St. Louis—Miriam Realty Co., capital \$20,000, incorporated; Ben Reiss, 4055a Lafayette St.

N. C., Goldsboro—John R. Crawford, Inc., capital \$100,000, incorporated; John R. Crawford, Charles S. Norwood.

Tex., Beaumont—Liberty Investment Co., incorporated; E. L. Nail, J. L. C. McFaddin.

Tex., Palacios—Palacios Bay Development Co., incorporated; Garland T. Booking, W. M. Sells.

### Lumber Enterprises

Fla., Jacksonville—Morgan V. Gress, Gress Mfg. Co., 228 Hogan St., reported, will rebuild burned buildings occupied by F. S. Buffum Lumber Co., 234 Ives St., as planing mill and lumber sheds.

Fla., Sarasota—Robinson Lumber Co., incorporated; W. T. Robinson, R. B. Robinson.

Tenn., Jamestown—Shapero Lumber Co., incorporated; Will R. Stone, B. D. Shapero, Jr.

Va., Clifton Forge—Deaton & Linkinhoker, Inc., capital \$50,000, incorporated; L. H. Linkinhoker.

Va., Wytheville—Bailey Lumber Co., 1118 Bluefield St., Bluefield, W. Va., reported, acquired plant of Gibson & Davis; will operate; W. F. Gibson, Jr., in charge.

### Mining

Alabama—Butler Brothers, 500 Minnesota Bldg., St. Paul, Minn., engaged in putting up pilot plant, Pratts Station, Barbour County, between Clayton and Louisville for production of Fullers earth; material being assembled and plant will be in operation soon; later plans large commercial size installation; address C. C. Ruprecht, Clayton, Ala. 4-7

Ky., Frenchburg—Menifee Limestone Co., incorporated; Dorsey Ratliff, Henry Wells.

Ky., Hopkinsville—Bi-State Minerals Co., incorporated; Gant Gaither, John T. Edmunds.

### Miscellaneous Construction

Arkansas-Mississippi—U. S. Engr. Office, Vicksburg, Miss., has low bids for 55,584,700 cu. yd. earthwork on east and west banks Mississippi River, designated as follows by name, item number, quantity (cu. yd.) bidder,



amount: Princeton new levee and enlargement—215L-A, 960,500, R. T. Clark Co., Inc., Delta Construction Co., J. W. Noble and M. T. Morrissey, Natchez, Miss., \$158,194; 515L-B, 466,500, Forcum James Co., Dyersburg, Tenn., \$76,040; Valewood to Mayersville—533L-A, 334,500, R. T. Clark Co., Inc., Delta Construction Co., J. W. Noble and M. T. Morrissey, \$54,858; 533L-B, 950,000, McWilliams Dredging Co., 1115 Canal Bank Bldg., New Orleans, La., \$127,300; 533L-C, 999,000, R. T. Clark Co., Inc., Delta Construction Co., J. W. Noble and M. T. Morrissey, \$136,863; 533L-D, 266,000, Council & Lewy, & J. T. Pollard, Greenville, Miss., \$46,284; 510R-A, 797,600, R. T. Clark Co., Inc., Delta Construction Co., J. W. Noble and M. T. Morrissey, \$114,854; 510R-B, 810,600, same contractors, \$124,832, and E. F. Powers Construction Co., Harvey Bldg., West Palm Beach, Fla., identical bid. 3-31

Ky., Lexington—City Planning & Zoning Comsn., J. J. Curtis, Chmn., City Hall, selected following to submit designs for \$10,000 James Lane Allen memorial fountain, Gratz Park; Lexington Monument Co., Brown Monument Works and McNeil Marble Co., all Lexington; Fisher Monument Co., Winchester, and Peter & Burghard Stone Co., 13th and Maple Sts., Louisville. 3-31

Louisiana—War Dept., Maj.-Gen. Lytle Brown, Ch. of Engrs., reported, announced plans for expending \$3,000,000 for levee work in Atchafalaya Basin; main levee between Port Barre and Henderson will be brought up to the grade and cross section specified in the project, giving an increase of 10 to 12 ft. in height of levee.

La., Lake Charles—Orange Car & Steel Co., Orange, Tex., has contract for 450 tons steel for wharf and warehouse for Lake Charles Harbor & Terminal Dist. 2-11

Md., Sharpsburg—Office of Quartermaster, Headquarters Third Corps Area, Baltimore, has low bid from Poffenberger & Mause, Myersville, for rubble stone retaining and guard walls on avenues and roads. 4-7

Mo., Caruthersville—Anderson, Clayton & Co., Cotton Exch. Bldg., Houston, Tex., plans large terminal for river shipment of Southeast Missouri and Northwest Arkansas cotton; acquired tract on riverfront between Ward and Carlton Ave.; lease building of A. B. Jones Wholesale Grocer Co. for office.

Va., Petersburg—War Dept., Petersburg National Military Park Comsn., receives bids May 6 for approx. 2 mi. earthwork in Petersburg National Military Park, Va.

Mo., Caruthersville—Anderson-Clayton Co. plans large terminal for river shipment of Southeast Missouri and Northeast Arkansas cotton; acquired tract on riverfront between Ward and Carlton Ave.; lease building of A. B. Jones Wholesale Grocer Co. for office.

Mo., University City, St. Louis—City, J. K. Montelth, Park Commr., 6801 Delmar St., postpone construction of swimming pool, Heman Park. 1-7

Missouri—U. S. Engr. Office, St. Louis, has low bid from Kansas City Bridge Co., Kansas City, at \$88,400, for 3600 l. f. pile clump dikes in Mississippi River at Devils Island and Kinney Point.

Tex., Dallas—Standard-Tilton Co., 2402 S. Ervay St., has permit for 6 conc. grain bins, \$10,000.

Va., Quantico—Chief, Bureau of Yards and Docks, Navy Dept., Washington, let contracts for filling at marine barracks: Camp Creek area, Trimount Dredging Co., 10 State St., Boston, Mass., \$38,000; rifle range area, P. T. McDermott Co., Inc., 1014 Wisconsin Ave., Washington, D. C., \$35,840.

Va., Richmond—City, R. Keith Compton, Dir. Public Works, opens bids May 4 for 2-story transit shed and warehouse along foot of Nicholson St.; struc. steel frame, corrugated metal siding except that second floor is to be of double wall construction with suitable insulation between, with provision for maintaining uniform temperature; bids will be received on corrugated metal siding of galvanized iron, Armco, Toncon, aluminum, etc.; leased to Richmond municipal wharf between Gillies Creek and Waterfront Terminals, Inc.; H. L. Lawry, Pres., Norfolk.

### Miscellaneous Enterprises

Ark., Stuttgart—Chamber of Commerce, Dr. J. M. Stafford, Sec., reported, negotiating with company for establishing barge line on White River to convey freight from Preston's Ferry, 16 miles east of here, to New Orleans, La.

Fla., Miami—Fort Pierce Steamship Co., chartered; W. F. Parker, Seybold Bldg.

Fla., Orlando—American Castorex Enterprise, John D. Fulton, P. O. Box 1570, erecting commercial tannery for rabbit furs. See Want Section—Machinery and Supplies.

Fla., Sarasota—Cleaners & Dryers of Sarasota, Inc., chartered; W. N. Stevens, C. E. Fraile.

Ga., Athens—W. A. Cooper and J. F. Cole, reported, manufacture patented combination plow and boll weevil poisoning machine; machine being assembled at New Georgia garage.

Ga., Eatonton—Thomas W. Scott, A. Newt Wilson and associates, reported, rebuild Eatonton Co-operative Creamery.

Ga., Hahira—Julep Cigaret Mfg. Co., Boston, Mass., T. R. Hughes and L. F. Hughes, local mgs., reported, has former Gold Leaf Cigaret Co.'s plant; install machinery; establish branch plant. 10-8

Ky., Owensboro—Kentucky Cleaners, Inc., chartered; George E. Adelman, J. A. Dodson.

La., New Orleans—Weinberger Banana Co., Inc., Chartered; Chas. Weinberger, 7022 St. Charles Ave.

Md., Baltimore—Allied Products Co., Inc., Albert A. Leving, Treas., 823 Munsey Bldg., leased former plant of DeLion Tire & Rubber Co., E. Eager and Eaton Sts.; plans manufacturing patented leatherette coating compound; C. E. Boone in charge technical department.

Md., Baltimore—Maryland Container Co., Inc., R. R. Clow, Pres., leased portion of building S. W. Cor. Eutaw and West Sts.; manufacture corrugated shipping containers.

Md., Catonsville, Baltimore—Hilton Farms Dairy, Inc., chartered; Wm. G. Knapp, Rolling Rd.

Md., Chesapeake Beach—Supreme Court, Washington, upheld right of Chesapeake Beach Railway Co., T. Keely, Jr., Pres., Washington, D. C., to establish ferry service across the bay from Chesapeake Beach to point on Trippe Bay, Dorchester County.

Md., College Park—Tax Publications, Inc., chartered; Charles S. Noble, 1650 Howard Ave., N. W., Washington.

Md., Hagerstown—Log Cabin Ice Cream Co., incorporated; Augusta Ludwig, 50 W. Antietam St.

Md., Lonaconing—Lonaconing Glass Co., reported, soon rebuild burned portion of plant. 3-19

Mo., Excelsior Springs—Excelsior Springs Mineral Water Salt Crystal Co., incorporated; Henry Duderstadt, 6041 Main St., Kansas City.

Mo., Hickman—Etem Dairy Co., incorporated; George L. Etem.

Mo., Kansas City—Home Show Printing House, Inc., capital \$15,000, incorporated; Mary Ethel Chapman, 4944 Holly St.

Mo., St. Louis—General Sales Device Mfg. Co., incorporated; M. L. Dove, 4418 Kenneth Place.

Mo., St. Louis—St. Louis Truck & Mfg. Co., incorporated; H. M. Kinner, 2134 Gravois St.

Mo., St. Louis—General Aggregate Corp., organized with \$500,000 capital to manufacture a "cellastone" aggregate, patent of Claude H. Hunsaker, 501 Perdue St., St. Louis; product is prepared from blast furnace slag heated to about 3500 degrees, infiltrated with air bubbles, and cooled to light weight, cellular mass of high tensile strength; \$150,000 plant proposed to be erected in St. Louis industrial district, output 20 cars daily; branch plants also planned in several cities.

Mo., St. Louis—Midwest Insulation & Supply Co., J. G. Henges, Pres., 826 Mart Bldg., organized for installation of Rock Wool.

Mo., St. Louis—Anydepth Air Pumps, Inc., L. R. Klinger, V.-Pres., 1611 N. Broadway, organized for development of pumps for wells and cisterns which by means of air compressors, create a pressure sufficient to bring contents to surface; governor control affords a uniform pressure; Master Machine & Tool Co., 1609 N. Broadway, handling experimental and model work in connection with air pump.

Mo., St. Louis—Supreme Products Co., T. H. Soell, 4533 Auburon Ave., organized to manufacture cleaners and polishers for metals and furniture; has building, will install machinery, including mixers, sterilizers, bottlers, cappers and conveyors.

Mo., St. Louis—Research Electric, Inc., capital \$50,000, incorporated; Wm. S. Cordry, Wainwright Bldg.

N. C., Burlington—Times-News Publishing Co., incorporated; Victoria N. Crowson, Burlington; R. B. Terry, High Point.

Okla., Ardmore—Washita Amusement Co., incorporated; Bobbie Bullock, Charles Trego.

Okla., Ardmore—Eastern Oklahoma Theatre, Inc., chartered; Harry Lowenstein, Charles Trego.

Okla., Norman—Jack T. Foster plans \$30,000 cleaning plant; 30x140 ft.; brick.

Okla., Tulsa—Oklahoma Traffic Signal Co., capital \$25,000, incorporated; C. E. Whitman, 4137 S. 25th Ave., West.

Tenn., Chattanooga—DeLoach Mill Mfg. Co., 535 W. Main St., advises will not rebuild at this time, may rebuild later. 4-4

Tenn., Memphis—Thomas F. Shea Construction Co., capital \$15,000, incorporated; Thomas F. Shea, 39 Belleaire Dr.

Tenn., Memphis—Mitral Tag Co., incorporated; E. E. George, C. E. Crews.

Tenn., Pulaski—Stephens-Huffins Mfg. Co., 330 Public Square, Nashville, reported, leased building for shirt and pants plant.

Tex., Beaumont—Deutser-Crawford Co., capital \$21,000, incorporated; B. Deutser, T. C. Riggs; construction.

Tex., Beaumont—A. C. MacFarland, reported, has 2 ferry boats under construction for ferry service connecting Cameron Parish, La., and Sabine Pass, Tex.

Tex., Corpus Christi—Sun Mutual Life Insurance Co., 506 Sherman bldg., incorporated; D. H. Best, George B. Hanley.

Tex., Dallas—Slendress Laboratories Co., Inc., chartered; J. S. Wilder, 702 S. Tyler St.

Tex., Houston—Transportation Equipment Co., incorporated; F. G. Dorsey, 1420 Missouri St.

Tex., Longview—Dixie Land Amusement, Inc., chartered; E. O. Swallow.

Tex., Rosenberg—Swindler-Johnson, Inc., chartered; Harvey E. Johnson, Wm. L. Swindler.

Tex., San Antonio—Howards of San Antonio, incorporated; J. Crockett Snider, 331 S. Flores St., steam laundry.

Tex., Tyler—Coca Cola Bottling Works, 1400 W. Erwin St., erecting plant; 1 and 2 stories, brick, steel and conc., steel windows; owner builds; cost \$20,000.

Va., Crewe—Crewe Amusement Co., Inc., chartered; R. D. Bradshaw.

Va., Fredericksburg—City Bakery, Inc., capital \$25,000, incorporated; A. V. Pankey, Harrisonburg.

Va., Lynchburg—Rockford Fibre Container Co., J. H. Conway, Sec., Rockford, Ill., established plant in building at Lynchburg to manufacture solid fibre containers from a specially constructed board which is made almost entirely from wood pulp; some machinery moved from Rockford plant; purchased automatic printing, scoring and slotting machine from Geo. W. Swift, Jr., Inc., Bordentown, N. J. 4-7

Va., Lynchburg—Friendly Industries, Inc., capital \$20,000, incorporated; E. B. Patterson, 1110 17th St.; vending machines.

Va., Scottsville—Williams Printing Co., Inc., chartered; Hugh T. Williams, Danville.

W. Va., Parkersburg—Vitro-Agate Co., capital \$25,000, incorporated; George W. Johnson, Myrtle G. Smith.

### Motor Bus Lines and Terminals

N. C., Monroe—Seaboard Air Line Ry., L. R. Powell, Jr., Receiver, Norfolk, Va., applied to State Corporation Comsn., Raleigh, for permission to supplement freight service in North Carolina with motor truck line between Monroe and Hamlet.

### Railways

Md., Baltimore—Pennsylvania R. R. Co., C. D. Young, Asst. V.-Pres. & Gen. Pur. Agt., Philadelphia, placed orders with own Enola steel car shops, Harrisburg, Pa., for remodeling 25 standard hopper cars for special purpose of hauling cement in bulk; new parts to be made at company's Altoona works.

Mo., St. Louis—Wabash Ry. Co., E. L. Crugar, Ch. Engr., authorized by Federal Court to expend approx. \$200,000 for repairing and improving roadbeds and bridges, including \$72,350 for repairs between Carrollton and Hardin, Mo., and \$7898 for replacing bridge near Sampels, Mo.

Texas—Texas & Pacific Ry. Co., J. L. Lancaster, Pres., Dallas, reported, denied permission by Interstate Commerce Comsn., Washington, to build 330 miles of line in Texas. 10-23-30

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

### Proposed Construction

Alabama—Mobile County, E. C. Doody,



Clk. Bd. of Revenue and Road Comms., Mobile, voted to request State Highway Comn., L. G. Smith, Highway Dir., Montgomery, to call for new bids for 23.58 mi. paving, road from Mobile via Wilmer to Mississippi state line, due to inability to sell bonds. 3-17

D. C. Washington—Dist. Comms., 500 Dist. Bldg., open bids April 25 for 60,000 cu. yd. grading. 4-7

D. C. Washington—Quartermaster Depot, 20th and C Sts., N. W., opens bids April 22 for constructing and finishing complete all grading, draining, slag base, curb, combination curb and gutter, wing walls to head walls of culverts and constructing conc. road base on Ord and Weltz Aves.; also conc. curbs in circle, McPherson Ave., Arlington Cemetery. 4-7

Florida—State Road Dept., H. H. Wells, Chmn., Tallahassee, plans starting work soon on State Highway 74, Ocala to Hernando, Jacksonville-Tampa short route.

KENTUCKY—State Highway Comsn., Ben Johnson, Chmn., Frankfort, has low bids for 8 roads and bridge in following counties:

Caldwell-Trigg—10.880 mi. 24 to 30 ft. grading and draining, Princeton-Gracey road, S. P. 280 AB-G, Bell & Bell, Nashville, Tenn., \$71,728 (awarded), using first cl. rein. conc. pipe; 4-7

Fleming—10.838 mi. 18-ft. surfacing, Flemingsburg-Carlisle road, S. P. 222 A1-S & S. P. 43 B-S, Berry & Kelley, Louisville, \$120,151, using cold lay sheet asphalt-waterbound macad. base; 4-7

Laurel—12.164 mi. 24 to 30 ft. grading, 30 ft. draining, London-Somerset road, F. A. 195 A-G, Myers Bros., Campbellsburg, Ind., \$80,967 (awarded), using first cl. rein. conc. pipe; 4-7

Marshall—2.342 mi. 24 to 30 ft. grading, 30 ft. draining, Benton-Mayfield road, S. P. 1 E-G, Frazer & Cooke, Wickliffe, \$20,220 (awarded), using first cl. rein. conc. pipe; 4-7

Nicholas—5.840 mi. 18-ft. surfacing, Carlisle-Flemingsburg road, S. P. 43 A-S, Gay Coleman Construction Co., Ashland, \$75,826, using cold lay sheet asphalt-waterbound macad. base; 3.139 mi. 24 to 30 ft. grading, draining, Carlisle-Flemingsburg road, S. P. 43 B-G, Berry & Kelley, \$65,835, using first cl. rein. conc. pipe, or first cl. D. S. vit. pipe; 4-7

St. Louis—1.785 mi. stone delivery, Franklin-South Union road, C. B. Perat, Auburn, \$5100, crushed limestone; 5.781 mi. stone delivery, same road, Rec. 266 A2-S, same contractor, \$4500. 3-31

Ky., Frankfort—State Highway Commission adopted 2-year budget calling for expenditure of \$32,000,000, including \$12,341,164 for construction, \$8,500,000 for maintenance, \$1,500,000 for equipment, \$1,200,000 for administration, \$625,000 for location work, \$637,715 for engineering, and more than \$1,800,000 for overruns. 4-7

La., Minden—Webster Parish Police Jury authorized construction of road, Doyle to Dixie-Overland Highway. 4-7

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids April 26 for 5 roads in following counties:

Caroline—1.60 mi. conc., Ridgely-Greensboro road, near Boonsboro toward Greensboro, Co-75-22; 4-7

Montgomery—8.38 mi. conc., White Oak to Ashton, M-213-311; 4-7

Frederick—2.18 mi. conc., Licksville-Point of Rocks road, end F-137 to Point of Rocks, F-188-52; 4-7

Garrett—3.28 mi. conc., Einzell road, National Pike to Pennsylvania state line, G-66-64; 4-7

Talbot—4.71 mi. macad. resurfacing, Tilghman Island road, end T-32 south of Wittman to Tilghman Island, T-46-22. 4-7

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, has low bids for 5 roads in following counties:

Baltimore—0.61 mi. conc., for elimination of curves on Devil's Elbow, National Pike east of Ellicott City, B-240-711, FAP 138-A Reop., Harry T. Campbell Sons Co., Towson, \$62,278; 4-7

Carroll—1.29 mi. conc., Marston road, end of Cl-74 at Marston toward Ridge road, Cl-83-52, P. Reddington & Sons, 2 E. Lexington St., Baltimore, \$31,221; 4-7

Howard—1.29 mi. macad., Jonestown-Benton's Corner road, end Ho-106 at Jonestown to Benton's Corner, Montgomery road, Ho-111-34, Caton Construction Co., Halethorpe, Baltimore, \$17,419; 4-7

Queen Anne's—3.52 mi. conc., Queen Anne-Ruthsburg road, end of Q-67 to Ruthsburg, Q-76-24, Union Paving Co., Broad and Stiles Sts., Philadelphia, Pa., \$38,598; 4-7

Worcester—0.88 mi. conc., Philadelphia Ave., Ocean City, Worcester Ave. to Ninth St., Wo-117-12, Phillips Bros., Salisbury, \$10,621. 4-7

Md., Baltimore—City, George Cobb, Highways Engr., opens bids April 27 for supplying and applying bitum. materials; same date for 12,000 sq. yd. cement conc. paving, Contr. 617. 4-7

Md., Baltimore—City, George Cobb, Ch. Highway Engr., has low bid from Aiello Construction Co., Gough & Dean Sts., at \$17,607, for 10,000 sq. yd. conc. paving, Contr. 615. 4-7

Md., Towson—Baltimore County, Jackson P. Grason, Roads Engr., advises regarding bids due April 15 for tar or asphalt, bitum. patching, and stone or slag, that there was no letting on this date. 4-7

Miss., Prentiss—Jefferson Davis County Supvrs. authorized R. E. Dale, Clk. of Bd., to call for bids for road machinery for several road districts, to be let at May meeting; wheel type tractors and maintenance graders will be purchased with trade-in of old machines. 4-7

Mo., St. Louis—St. Louis Public Service Co., Sam Greenland, Gen. Mgr., offered to pave central strip of newly widened Gravois Ave., \$34,000. 4-7

Mo., St. Louis—City Bd. of Public Works, W. W. Horner, Ch. Engr. of Paving, City Hall, has low bids for conc. paving: Hapton Ave., Kunze Construction Co., 3889 Delor St., \$12,373; Bittner St., Perkinson Bros. Construction Co., 3237 Carter St., \$6529; Regal Pl., Perkinson Bros. Construction Co., \$8634; Annetta Ave., Stiers Bros. Construction Co., 6001 Lowdell Blvd., \$6816; Partridge Ave., Perkins Bros. Construction Co., \$6276; Hyams Pl., Skralinka Construction Co., Security Bldg., \$15,234; Warrenite bitulithic paving, Granite Bituminous Paving Co., Ry. Exch. Bldg., \$19,259. 3-24

Mo., St. Louis—City, Bd. of Public Service, Office of the President, Room 304, City Hall, opens bids April 26 for improving Macklind Ave. 4-7

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, opens bids April 26 for 2 roads and 2 bridge projects in following counties:

Woodward—11.389 mi. grading, draining, State Highway 34, Sharon to Woodward, SAP 818, Sections A & B, and Sec. A-bridge, rein. conc. box, and Sec. B-bridges, 5 36-ft. I-beam spans with 22-ft. roadway, and 3 rein. conc. boxes; "A" roadway, 58,126 cu. yd. exca., 53.18 cu. yd. "A" conc., 3851 lb. deformed steel bars, 268 l. f. 18, 24 and 30 in. rein. conc. pipe; "A" bridge, 92.9 cu. yd. "A" conc., 8560 lb. deformed steel bars; "B" roadway, 115,284 cu. yd. exca., 481.89 cu. yd. "A" conc., 432 l. f. 18, 24 and 30 in. rein. conc. pipe; Sec. "B" bridges, 1500 cu. yd. "A" exca., 706 cu. yd. "A" and "AA" conc., 73,110 lb. deformed steel bars, 362 l. f. rein. conc. hand rail, 90,700 lb. struc. steel, 1470 l. f. rein. conc. piling; 4-7

Custer—4.033 mi. grading, draining, State Highway 34, 1/4 mi. north of Hammond toward Morewood, SAP 812-E, and E-bridges, 5 36-ft. I-beam spans with 22-ft. roadway, 6 36-ft. I-beam spans with 22-ft. roadway, and 80-ft. steel truss with 2 36-ft. I-beam spans having 22-ft. roadway; "E" roadway, 117,592 cu. yd. exca., 250.51 cu. yd. "A" conc., 21,780 lb. deformed steel bars, 187 l. f. 24-in. rein. conc. pipe; "E" bridges, 7000 cu. yd. "A" exca., 8086 cu. yd. conc., 112,143 lb. deformed steel bars, 1341 l. f. rein. conc. hand rail, 397,900 lb. struc. steel, 2400 l. f. untreated timber piling, 4165 l. f. rein. conc. piling, removing 5 old bridges. 4-7

Okla., Oklahoma City—City, L. M. Bush, Engr., widen Sixth St., Broadway to Walnut Ave. 4-7

TENNESSEE—State Dept. of Highways & Public Works, R. H. Baker, Commr., Nashville, has low bids for 2 roads and 2 bridges in following counties:

Knox-Blount-Sevier—5.89 mi. grading, draining, State Highway 35, FAP 249-A, and 2 bridges over 20-ft. span, Chandler Bros., Virgilina, Va., \$104,844; 4-7

Davidson-Sumner—7.1 mi. paving, State Highway 11, Municipal Paving Co., Cotton States Bldg., Nashville, \$95,166. 4-7

Tenn., Knoxville—Dept. of Interior, Washington, plans 55-mi. horseback trail 1 mi. high on crest of range in Great Smoky Mountains National Park; est. \$32,000; Ross Eakin, Park Supt. 4-7

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., G. G. Wickline, Bridge Engr., Austin, opens bids April 23 for 23 road and 3 bridge projects, est. \$2,253,000, in following counties:

Trinity—14.648 mi., west Neches River toward Groveton to Piney Creek, Highway 94, 9281 cu. yd. gravel or crushed stone, f. o. b. unloading point, 9281 cu. yd. material hauled first 1/4 mi., 125,541 cu. yd. material hauled additional 1/4 mi., M-11-J-4; 4-7

Van Ande—8.95 mi., Highway 64, east of Edom to east of Ben Wheeler, M-10-U-6, 105,013 gal. asphalt, 5250 cu. yd. aggregate 4-7

for surface treatment;

Cherokee—10.614 mi., Highway 40, Anderson County line to Jacksonville, M-10-V-6, 124,546 gal. asphalt, 6227 cu. yd. aggregate for surface treatment; 4-7

Kinney—18.664 mi., Highway 3, Uvalde County to Brackettsville, M-22-A, 7928 cu. yd. caliche surface course hauled first 1/4 mi., 56,420 cu. yd. caliche surface course hauled additional 1/4 mi., 1500 cu. yd. stripping pits; 4-7

San Augustine—9.20 mi., Highway 8, San Augustine to Sabine County, M-11-H-4, 13,867 sq. yd. double bitum. surface treatment, 72,492 sq. yd. 3/10 gal. seal coat, 150 hours rolling; 4-7

Dallas—6.85 mi., Highway 14, Hutchins to Ellis County, M-18-A-3, 72,336 sq. yd. 3/10 gal. seal coat; 4-7

Val Verde—cleaning and repainting 460-ft. Pecos River bridge west of Del Rio, M-15-D-4; 4-7

Gonzales—12.57 mi., Highway 3, east city limits of Gonzales to south of Waelder, M-13-G-4, 125,364 sq. yd. 3/10 gal. seal coat, 125 hours rolling; 4-7

Wilson—4.00 mi., Highway 81, Gonzales-Wilson County line west, M-13-F-4, 37,554 sq. yd. limestone rock asphalt surface course, 60 hours rolling; 4-7

Henderson—13.824 mi. conc., Highway 31, Athens to Navarro County, FAP 575-D & E, Unit 2, 51,227 cu. yd. common roadway exca., 13,427 M. gal. jetting and ponding, 174,644 sq. yd. subgrade, 50,088 cu. yd. sand subgrade treatment, 451,300 cu. yd. material hauled additional 1/4 mi., 727 hours extra rolling embankment, 162,230 sq. yd. conc. pavement—water cement ratio; 646,834 lb. rein. steel for pavement, 4793 sq. yd. 2 course limestone rock asphalt surface course, 1800 l. f. vit. tile underdrain; 5,094 mi. conc., Highway 19, Anderson County to south of Athens, FAP 560, Unit 2-SP 845, Unit 2, 1963 cu. yd. common roadway exca., 8649 M. gal. jetting and ponding, 59,054 sq. yd. subgrade, 4998 cu. yd. sand subgrade treatment, 520 cu. yd. material hauled additional 1/4 mi., 265 hours extra rolling embankment, 59,054 sq. yd. conc. pavement—water cement ratio, 237,544 lb. rein. steel for pavement, 953 sq. yd. 2 course limestone rock asphalt surface course; 4-7

Matagorda—10.311 mi. conc., Highway 60, Bay City to Wharton County, FAP 609-B, Unit 2-SP 298-B, Unit 2, 194,481 sq. yd. fine subgrade and shoulders, 114,985 sq. yd. conc. pavement—water cement ratio, 220 sq. yd. high early strength conc. pavement—water cement ratio, 217,508 lb. rein. steel for pavement, 118 R. W. markers, 1570 l. f. wire mesh guard fence; 4-7

Ellis—15.559 mi. conc., Highway 14, south city limits of Ennis to Dallas County, FAP 179, 384-Reop., & 507-A, Unit 2, 6500 cu. yd. common roadway exca., 349,992 sq. yd. fine grading subgrade and shoulders, 920 cu. yd. gravel surface course, 183,051 sq. yd. conc. pavement—water cement ratio, 408,592 lb. rein. steel for pavement, 26,071 l. f. wire cable guard fence, 455 R.W. markers, 207 lb. rein. steel (structures), removing 7 old structures, 816 l. f. French drains, 1767 cu. yd. sand subgrade treatment, 31,367 cu. yd. material hauled additional 1/4 ft.; 4-7

Haskell—13.782 mi. conc., Highway 18, connection with Highway 30 near Stamford northwest to Stonewall County, FAP 581-A, Unit 2, 2500 cu. yd. common roadway exca., 234 M. gal. ponding, 291,077 sq. yd. fine grading subgrade and shoulders, 22,931 cu. yd. sand subgrade treatment, 674,742 cu. yd. material hauled additional 1/4 mi., 146,043 sq. yd. conc. pavement—water cement ratio, 315,175 lb. rein. steel for pavements, 2000 l. f. wire mesh guard fence; 4-7

Hemphill—16.982 mi. conc., Highways 4 and 33, Roberts County to city limits of Canadian, FAP 45-Reop., Sec. A, Unit 3 & 625-C, Unit 2, 3677 cu. yd. common roadway exca., 8265 M. gal. jetting and ponding, 339,316 sq. yd. fine grading subgrade and shoulders, 15,255 cu. yd. sand subgrade treatment, 199,700 sq. yd. conc. pavement—water cement ratio, 722 sq. yd. high early strength conc. pavement—water cement ratio, 330,968 lb. rein. steel for pavement, 17,240 l. f. wire mesh guard fence; 4-7

Randall—15.536 mi. caliche base courses with single bitum. surface treatment, Canyon to Deaf Smith County line, FAP 174-A, Reop., Unit 2-SP 1000-A, Unit 2, 20,400 cu. yd. stripping material pits, 315,373 sq. yd. fine grading subgrade and shoulders, 4409 M. gal. sprinkling subgrade and base course, 9066 M. gal. water hauled additional mile, 2067 hours extra rolling subgrade and base courses, 84,070 cu. yd. caliche base courses, 730,930 cu. yd. material hauled additional 1/4 mi., 183,672 sq. yd. single bitum. surface treatment; 4-7

Kerr-Kendall—12.689 mi. grading, Highway 9, small drainage structures, FAP 631-C & D-SP 139-C & D, 87.24 acres clearing and grubbing, 195,600 cu. yd. exca., 391 hours blading embankment, 277 M. gal. jetting and ponding, 1051 cu. yd. borrow, 828 cu. yd. "A" conc. (culverts); 97,367 lb. rein. steel (structures), 264 R.W. markers, removing 4-7

5 old structures;

**Houston**—15.911 mi. grading, draining, Highway 21, north of Crockett to Neches River bridge, FAP 499-B, 37.99 acres clearing, 45.98 acres grubbing, 190,022 cu. yd. exca., 300 hours blading embankment, 934 cu. yd. "A" conc., 98,783 lb. rein. steel (structure), 34,580 lb. struc. steel, 1,920 m. f. b. m. treated timber, 850 l. f. treated timber piling, 10,550 cu. yd. wagon or truck haul, 2375 cu. yd. same additional ¼ mi., 89 cu. yd. grouted rip-rap, 240 l. f. bridge railing, removing 37 old structures, 406 R.W. markers;

**Karnes**—15.502 crusher-run sandstone and sledged sandstone base course with crushed limestone screenings, Highway 112, Eceto Creek northeast to Wilson County, SP 789-B & C, Unit 2, 10 acres clearing and grubbing material pits, 4104 cu. yd. common roadway exca., 2544 M. gal. jetting and ponding, 4104 cu. yd. borrow, 20,497 cu. yd. strip-ping material pits, 254,797 sq. yd. fine grading subgrade and base courses, 3279 hours extra rolling subgrade and base courses, 1230 M. sprinkling subgrade and base courses, 2049 M. gal. water hauled additional mile, 44,449 cu. yd. sledged sandstone base course, 20,563 cu. yd. crusher-run sandstone base course, 2,541,853 cu. yd. material hauled additional ¼ mi., 8198 cu. yd. crushed limestone screenings, 8198 cu. yd. crushed limestone screenings binder course, 516 French drains, 60 l. f. drilling water wells, 6870 l. f. wire mesh guard fence, 242 R.W. markers; 18.93 mi., Highway 16, Bee-Karnes County to northwest of Karnes City, M-13-H-4, 200,000 sq. yd. limestone rock asphalt surface course, 200 hours rolling;

**Waller**—1.947 mi. conc., Highway 20, Brazos River bridge eastward, SP 897, Unit 3, 34,270 sq. yd. fine grading subgrade and shoulders, 20,414 sq. yd. conc. pavement-water cement ratio, 204 sq. yd. high early strength conc. pavement-water cement ratio, 42,935 lb. rein. steel for pavement, 19,960 l. f. removing and rebuilding wire mesh guard fence, 1260 cu. yd. dry rip rap Cl. 1;

**Panola**—5.980 mi. triple asphalt surface treatment, Highway 64, Carthage westward, SP 591, Unit 3, 4382 cu. yd. aggregate for surface treatment, 55,947 cu. yd. material hauled additional ¼ mi., 83,182 gal. asphalt;

**Lubbock**—12.896 mi. caliche base course with triple asphalt surface treatment, Highway 137, Lubbock to Hockley County, SP 716-B, Unit 2, 79.4 M. gal. ponding, 30,000 cu. yd. stripping material pits, 2760 M. gal. sprinkling subgrade and base courses, 1671 M. gal. water hauled additional 1 mi., 1226 hours extra rolling subgrade and base courses, 61,362 cu. yd. caliche base course, 782,155 cu. yd. material hauled additional ¼ mi. (base course), 181,837 gal. asphalt, 8781 cu. yd. aggregate for surface treatment, 61,290 cu. yd. material hauled additional ¼ mi. (surface course), 166,663 sq. yd. fine grading subgrade;

**Brazoria**—8.488 mi. conc. pavement, West Columbia to Texas Ave. in Brazoria, Highway 36, SP 889-D, Unit 2, 1000 cu. yd. common roadway exca., 5261 M. gal. jetting and ponding, 151,898 sq. yd. fine grading subgrade and shoulders, 89,737 sq. yd. conc. pavement-water cement ratio, 260,764 lb. rein. steel for pavement, 2000 l. f. wire mesh guard fence;

**Kendall**—0.485 mi. Guadalupe River bridge consisting of 27 30-ft. 6 in. conc. deck girder spans, 22 ft. roadway, 2 52-ft. steel I-beam spans, 2150 ft. steel truss spans, 1 200-ft. steel truss span, 29 conc. pile bents, 4 open caisson type piers, and approaches near Comfort, FAP 631-B, Highway 9, 3610 cu. yd. common roadway exca., 11,890 cu. yd. wagon or truck haul borrow, 625 M. gal. jetting and ponding, 1144 cu. yd. "A" conc. (girders and bents), 699 cu. yd. "A" conc. (piers and bents), 188 cu. yd. "A" conc. plus 10% cement, 235 cu. yd. "B" conc., 360,436 lb. rein. steel, 680,500 lb. struc. steel for trusses and piers, 63,700 lb. struc. steel for I-beam spans, 5073 l. f. 16-in. square precast conc. piling, 1296, 185 l. f. conc. special railing, 120 cu. yd. dry rip rap, Cl. 1; 11.71 mi., Highway 9, Gillespie-Kendall County south, M-15-P-3, 116,788 sq. yd. double bitum. surface treatment, 130 hours rolling;

**Uvalde**—0.739 mi. Blanco River bridge consisting of 6 30-ft. 6-in. conc. deck girder spans, 1 120-ft. steel truss, 22-ft. roadway, open caisson type piers, precast conc. piling bents and abutments and roadway approaches, between Sabinal and Uvalde, 648 acres clearing and grubbing, 27,431 cu. yd. common roadway exca., 398 cu. yd. uncl. struc. exca., 249 cu. yd. "A" conc. for girders and slabs, 224.38 cu. yd. "A" conc. piers and bents, 87.36 cu. yd. "A" conc. plus 10% cement, 110 cu. yd. "B" conc., 94,878 lb. rein. steel, 146,120 lb. struc. steel, 1456 l. f. untreated timber foundation piling, 1380 l. f. 16 in. square precast conc. piling, 366 l. f. conc. railing (special) 330 cu. yd. cl. 1 dry rip-rap; Alt. for disc harrowing embankment, 1000 M. gal. jetting and ponding and 100 sta. yd. blading embankment.

Texas—State Highway Comsn. directed

Gibb Gilchrist, Highway Engr., Austin, to draw plans for grading, draining, Highway 38, Galveston-Alvin road, Galveston County line to point near Sugarland, through Alvin and Brazoria County to Fort Bend County line; Brazoria County to furnish fenced right-of-way 100 ft. wide and 1/3 of cost; also to draw plans and to call for bids for grading, draining, Highway 33, between Alvin and Harris County line.

Texas—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, voted \$350,000 allotments for constructing and maintaining highways.

Texas—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, ordered to prepare plans and take bids for Highway 3, east of Nueces River, Uvalde County, along present road to suitable site for grade separation structure with Texas and New Orleans R. R., thence east on new location to connection with present road ½ mi. east of Comstock; ordered bids taken on bridge, Highways 27 and 4 at junction over North Llano River, Kimble County.

Texas—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, ordered Highway 95 extended, Elgin to Bastrop, Bastrop County, and highway now numbered 169 ordered numbered 95 and extended, Smithville to Yoakum via Flatonia; allotted \$154,424 for road construction work and highway aid.

Tex., La Porte—City, F. Ruff, City Sec., taking bids for grading, 10-in. rock base, topping, guttering, curbing, alt. types paving 8 blocks in business section, 30 ft., \$35,000.

Tex., Marshall—City Comms. passed ordinance creating 11 paving districts on 8 streets; instructed W. C. Albright, City Engr., to prepare estimates; \$28,087 remains of \$150,000 bond issue.

Tex., San Antonio—Bexar County, W. A. Zurzbach, County Judge, rejected bids for paving; revise plans and take new bids; Precinct 1—Manton Ave., 175 tons asphalt in place; Somerset road, 29,000 yd. 1-in. asphalt topping; Edwards and Macdonald La-Coaste road, 90,000 yd. single bitum. surfacing; Precinct 2—Cataline Ave., 24 ft. wide 10 in. compact, asphalt 28 ft. wide, 1 in., approx. 1775 ft.; Cincinnati Ave., gravel 28 ft. wide, 10 in. thick, compact, asphalt 24 ft. wide, 1 in. thick, 1073 ft.; Woodlawn Ave., 6800 yd. 1-in. natural limestone rock asphalt; Precinct 3—Olmos Dr., double bitum. treatment; Perrin Beitel road, natural limestone rock asphalt, 1 in. thick; Nacogdoches road, natural limestone rock asphalt 1 in. thick; Lockhill Selma road, natural limestone rock asphalt, 1 in. thick; Precinct 4—W. W. White road, 11,000 yd. 1-in. natural limestone rock asphalt.

Virginia—State Dept. of Highways, C. S. Mullen, Ch. Engr., Richmond, has low bid from Tunstall-Johnson Co., Inc., Citizens Bk. Bldg., Norfolk, at \$36,250, for 14,500 sq. yd. cement conc. pavement 1-3, with alt. bid of \$29,870 for high early strength Portland cement conc. pavement 1-6.

Va., Fort Myer—Washington Quartermaster Depot, 20th and C Sts., N. W., Washington, D. C., opens bids April 29 for clearing, draining, grading, scarifying, curb, combination curb and gutter, conc. road base, slag base, bitum. wearing surface and sodding, Road 4 (Sheridan Ave.) within Arlington National Cemetery.

Va., Roanoke—City Council authorized W. P. Hunter, City Mgr., to call for bids for resurfacing Franklin road between Day and Highland Aves., S. W., 3 blocks.

Va., Petersburg—War Dept., Petersburg National Military Park Comsn., opens bids May 6 for 7 mi. earth road in Petersburg National Military Park.

Va., Richmond—City, R. Keith Compton, Dir. Public Works, opens bids April 26 for grading, graveling, curbing and guttering in various streets; 9825 cu. yd. exca., 15,000 l. f. conc. curbing and guttering, 21,625 sq. yd. gravel surfacing; funds available from \$200,000 appropriation.

W. Va., Charleston—State Road Comsn., Geo. E. White, Sec., plans road from Richwood to Marlinton; hard-surface Glade Creek-Persinger road.

#### Contracts Awarded

Ala., Montgomery—State Bd. of Administration let contracts for following: 4 graders, Teague Hardware Co., Montgomery; 2 graders, Millsap Road Machinery Co., 2220 N. 23rd St.; 2 graders, G. C. Phillips Tractor Co., 1625 Second Ave., S., both Birmingham, and 10 graders, J. D. Adams Co., total \$54,000; 16 trucks, \$10,032, to McGough Chevrolet Co., Inc.; 15 trailers, \$3260, to Utility Trailer Works, both Montgomery.

Kentucky—State Highway Comsn., Ben

Johnson, Chmn., Frankfort, let contract to F. J. Snider, Frankfort, at \$44,134, for 10,575 mi. grading, draining, Claysville-Mt. Olivet road, Mt. Olivet to junction with Cythiana-Brooksville road near Claysville, using first class rein. conc. pipe, S. P. 172-BG, Robertson County.

Miss., Lipscomb—City let contract to Herbert-Cargyle Construction Co., 2212 S. Second St., Birmingham, Ala., for resurfacing streets.

Mo., Kansas City—City, H. F. McElroy, City Mgr., let contract to J. A. Tobin Construction Co., 226 W. 39th St., at \$79,181, for repaving with brick, Seventh St. Trafficway; to E. J. Wetterstrom, at \$7453, for widening bridge on trafficway over Jersey Creek.

N. C., Raleigh—State Div. of Purchase & Contract let contracts for 500 truck chassis, ranging from \$450 to \$1500, to following: Dodge Bros. Corp., Detroit, Mich., through local dealers; Sanders Motor Co., Raleigh; Pyramid Chevrolet Co., Raleigh; C. H. Heritage Co., Greensboro; Corbitt Motor Co., Henderson, and Scott-Mathews Reo Co., Winston-Salem; let contract to Dixie Culvert & Metal Co., 801 Fayetteville St., for carload corrugated metal pipe; deep well pump, Dillon Supply Co., 216 S. West St.

S. C., Parris Island—Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract to L. S. Mitchell, Walterboro, S. C., for paving at marine barracks.

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, let contracts for 3 roads, totaling \$159,495, in following counties:

Pecos—24.6 mi. caliche base and triple asphalt surfacing, Highway 27, E. R. Leach, Allen Bldg., Dallas, \$11,853 (award had been withheld from March meeting);

Tyler—8.2 mi. grading, draining, Highway 40, E. G. Powell, Jacksonville, Tex., \$40,865;

Dallas—7.3 mi. single bitum. surface treatment, Garland to Dallas County line, N. P. Turner, Marshall, \$6779.

Virginia—State Highway Comsn., H. G. Shirley, Commr., Richmond, let contracts to Standard Oil Co. and Texas Company for 12,000,000 gal. bituminous surfacing at about \$500,000; Tunstall-Johnson Co., Citizens Bk. Bldg., Norfolk, received contract for 14,500 sq. yds. conc. repair work, on Routes 2, 10 and 500, near Norfolk.

#### Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Birmingham—Jefferson County, W. E. Corning, County Commr., C. J. Rogers, County Engr., Room 216, Court House, reported, completed excavation work for Ensey sewage disposal plant; soon ask for bids for constructing conc. and steel portions of building, cost \$200,000; work soon to start on sewage disposal plant at Bessemer, bids to be called for soon.

D. C., Washington—See Want Section—Bids Asked.

D. C., Washington—Hudson Supply & Equipment Co., 7 & T Sts., N. E., has contract for 125 tons rein. bars for Sewer Dept., P. O. No. 675; M. C. Hargrove, Pur. Officer.

Fla., Pensacola—Atlantic Gulf and Pacific Co., 15 Park Row, New York, reported, has contract at \$68,739 for filling, grading and drains at Naval Air Station, Bureau of Yards and Docks.

La., New Orleans—A. P. Boh & Co., 82 Perdido St., reported, have contract at \$16,110 for furnishing materials and constructing proposed conc. lined open canal and lined and covered canal and connections in Orleans Relief Canal, at Pumping Station No. 7, known as Contract 212-D.

Md., Cumberland—City, Henry W. Schaidt, City Engr., receives bids April 25 for renewal and extension of Greene St. Run conduit under Thompson Ave. See Want Section—Bids Asked.

Mo., Kansas City—Hyman Spitznagel, 3229 Victor St., reported, has contract for sewer near Walker Ave.; Brown Bros. low bidder for sewer at Jersey Creek and the trafficway.

Mo., St. Joseph—Bd. of Public Works receiving bids for sewers in Dist. Nos. 94, 126, 162 and 163.



contract to  
4, for 10,575  
e-Mt. Olivet  
h Cythiana  
using first  
BG, Robert  
3-10

contract to Har-  
2 S. Second  
ing streets.  
F. McElroy,  
Tobin Con-  
at \$79,181,  
St. Traffic  
\$7453, for  
over Jersey

Purchase &  
uck chassis,  
following:  
ch, through  
h, Raleigh;  
C. H. Her-  
Motor Co.,  
eo Co., Win-  
e Culvert &  
for carload  
pump, Dill-

Bureau of  
Washington,  
ell, Walter-  
e barracks.  
3-31

Gibb Gil-  
t contracts  
t following

and triple as-  
R. Leach,  
d had been

z. Highway  
ex., \$40,800;  
rface treat-  
line, N. P.  
3-31

sn., H. G.  
contracts to  
company for  
ing at about  
itizens Bt.  
for 14,500  
utes 2, 10

DEVELOP-  
nditure of  
classifi-  
ts are re

nty, W. E.  
rs. County  
orted, com-  
ey sewage  
for con-  
building,  
on sewage  
be called  
1-23

Section—

Supply &  
has con-  
wer Dept.  
r. Officer.

nd Pacific  
orted, has  
ading and  
of yards  
4-14

e Co., 222  
at \$18,110  
nstructing  
and lined  
as in Or-  
ation No.  
4-14

Schmidt,  
r renewal  
nduit un-  
ion—Bids

itecausky,  
tract for  
Bros. low  
and the

Works re-  
94, 120,

Mo., St. Louis—Bd. of Public Service re-  
ceives bids May 10 for constructing sedimen-  
tation basins at Howard Bend plant of St.  
Louis Water Works.

Okla., Oklahoma City—City, Albert McRill,  
City Mgr., reported, plans constructing \$60,-  
000 storm sewer, Santa Fe right of way from  
Eighth St. S.

Tex., Dallas—W. W. Horner, Conslt. Engr.,  
5842 Julian St., St. Louis, Mo., reported,  
completed plans, subject to few changes, for  
Mill Creek outlet storm sewer, cost \$525,000;  
will probably ask for bids about April 20.  
3-10

Va., Norfolk—J. P. Mahon, Essex Bldg.,  
reported, has contract for sewer pumping  
station at Fairmount Park.

Va., Roanoke—City, reported, lay number  
of small sewers.

### Telephones and Radio

Ark., Wynne—C. B. Jarvis, C. C. Widener,  
reported, applied to Federal Radio Comsn.,  
for construction permit for new station.

Mississippi—Interstate Commerce Comsn.,  
Washington, reported, authorized Southern  
Bell Telephone & Telegraph Co., Atlanta, Ga.,  
to acquire properties of Mississippi Telephone  
Co., operating in New Albany, Louisville,  
Naxapater, Philadelphia, Quitman, and Union  
and has toll lines extending to Tupelo, Can-  
ton and Meridian. 3-10

N. C., Asheville—South East Public Service  
Co., reported, construct trunk line circuit  
from Asheville to High Point.

N. C., Charlotte—City and Mecklenburg  
County, considering erecting radio station;  
may apply to Federal Radio Comsn., for per-  
mission.

Okla., Hydro—Farmers Mutual Telephone  
Co., incorporated; Ben Sylvester, Edgar E.  
Reber.

### Textile Mills

S. C., Chester—Potter & Shackelford, Inc.,  
Allen Bldg., Greenville, contractors for build-  
ing for Eureka Cotton Mills, let following  
additional contracts: Elevated doors, St.  
Louis Fire Door Co., 1134 S. Sixth St., St.  
Louis, Mo.; roll-up doors, J. S. Wilson Corp.,  
New York City; plumbing, Chester Plumbing  
& Heating Co., Chester; grading still under  
way; brick work on weave shed about 30 per  
cent complete; J. E. Sirrine & Co., Engrs.,  
215 S. Main St., Greenville. 3-24

### Water Works

Details of water works improvements in  
connection with the many LAND DEVELOP-  
MENT operations will be found under that  
classification.

Ark., Morrilton—Layne-Arkansas Co., Stutt-  
gart, reported, has contract at \$20,000 for  
deep wells for water supply and pumping  
equipment for Arkansas Power & Light Co.,  
C. L. Waldron, Mgr.

Fla., Tallahassee—City, Wm. R. Galt, City  
Mgr., receives bids May 31, change of date,  
for tank and tower. See Want Section—  
Bids Asked.

Ga., Jasper—City, reported, voted \$24,000  
water works bonds.

Ga., Manchester—City, I. H. Davis, has  
plans by Wiedeman & Singleton, Inc., 1404  
Candler Bldg., Atlanta, for \$12,000 improve-  
ments water works; erect filtration plant  
and coagulation basin; date of opening bids  
not set. 4-14

Md., Baltimore—Michigan Valve & Foundry  
Co., 3631 Parkinson St., Detroit, Mich., re-  
ported, low bidders at \$18,445, for valves and  
hydrants, Bureau of Water Supply. 4-7

Md., Towson—Dept. of Public Works, Bu-  
reau of Water Supply, Municipal Bldg., Bal-  
timore, receives bids April 27 for pumping  
equipment for Towson Pumping Station. See  
Want Section—Bids Asked.

Okla., Oklahoma City—City, reported, plans  
water mains extensions, \$100,000 appropria-  
tion; fund of \$15,000 available for new  
equipment in fire department; Albert McRill,  
City Mgr.

Tex., Beaumont—McDaniel Brothers have  
contract for constructing water works ware-  
house, Louisiana Ave. and Pine St. 2-25

Tex., Dallas—City, reported, authorized  
construction of 12-in. water line on Browder  
St. from Canton to Corinth and from Corinth

and Browder to Holmes St. connecting with  
South Dallas distributing system; cost \$12,-  
897.

Va., Bedford—Town, J. W. Gillespie,  
Mayor, T. M. Yancey, Engr., let contract to  
Ballard & Stoner, Bedford, for extension to  
water works system; construct conc. reser-  
voir, capacity 1,500,000 gal.; will probably  
let contract in few days for 20 tons rein.  
steel, 1500 ft. of 18-oz. copper. 4-14

### Woodworking Plants

Ark., Fort Smith—John L. Wrape, 2612 N.  
C St., reported, moving plant to Fort Smith  
from Clinton for manufacture of barrel  
stave; has site, S. Fifth and G Sts.; erect  
sheet metal building, 30x60 ft.

Md., Hagerstown—Jamison Cold Storage  
Door Co., 426 Forest Dr., reported, acquired  
productive and distributive facilities of cold  
storage door and allied products division of  
Victor Corp.; Victor Corp. to continue manu-  
facture of products other than cold storage  
doors and allied lines.

Mo., St. Louis—Dixie Flooring Co., incor-  
porated; Everett R. Vaughn, 411 N. Seventh  
St.

W. Va., Tunnelton—Mountain State Wood  
Products Co., Inc., Ernest LaRue, reported,  
erecting plant to manufacture wood prod-  
ucts and wood novelties.

### FIRE DAMAGE

Ala., Fort Payne—Barn of C. C. Kershway,  
one mi. north of Fort Payne; loss \$10,000.

Ala., Gadsden—Building occupied by Lasse-  
ter Automobile Agency; loss \$50,000.

Ark.-Tex., Texarkana—Reeves Furniture  
Co. building, John T. McChain, owner; loss  
\$40,000.

Ark., Eureka Springs—Residence E. J. Wal-  
ton; loss \$10,000.

Ark., Sheridan—Cearly and Lowman Ford  
Agency bldg.; loss \$15,000.

Fla., Carabelle—City Hall and Post Office  
Bldg.

Fla., Jacksonville—Lumber yards of F. S.  
Buffum Lumber Co., 234 Ives St.; loss \$150,-  
000.

Ga., Atlanta—Dwellings of A. B. Tumlin,  
2063 Ridgewood Drive, N. E. and C. P. Ben-  
ley, 3700 Peachtree Road.

Ga., Darien—Roman Catholic Church on  
the Ridge, 3 mi. from Darien.

Ga., Statesboro—Residence of Arthur How-  
ard, North Zetterower Ave.

Ga., Thomasville—Residence of Judge Ros-  
coe Luke; loss \$20,000.

Ky., Harlan—Crech Drug Store and office  
bldg.; loss \$12,000.

Ky., Hindman—General store of Young &  
Figman, Sturdivant Cafe; loss \$10,000.

Ky., Lynn Grove—High School Bldg.; loss  
\$30,000; address Calloway County Bd. of  
Education, Murray.

Ky., Louisville—Warehouse at Moore Co.'s  
barrel plant, Louisville Rd. and Fair St.

La., Lafayette—Lafayette Compress and  
Warehouse Co.'s building; loss \$350,000.

La., Logansport—Residence, W. D. Perry,  
Main St.

La., Lake Providence—Missouri Pacific  
Railroad Depot, E. A. Hadley, St. Louis, Ch.  
Engr.; loss \$30,000.

La., Ruston—Milton Kidd store building;  
loss \$20,000.

La., Winnfield—Residence of J. M. Gwin.  
Miss., Clarksdale—Club House of Italian-  
American Civic Society, 5 mi. south east of  
Clarksdale.

N. C., Charlotte—Residence of J. E. Har-  
key, Sharon road, outside city limits; loss  
\$10,000.

N. C., Kinston—Portion of West & Taylor's  
brick plant.

N. C., Jackson Springs—Jackson Springs  
Hotel and annex, Mr. Welch, Southern Pines,  
owner; loss \$75,000.

S. C., Columbia—Residence of G. L. Floyd,  
1731 Wheat St.

S. C., Charleston—Jasper Pavilion, Fort  
Moultrie reservation on Sullivan's Island.

S. C., Filbert—Farm home of Horance G.  
Thomasson, 3 mi. from Filbert on York-Clover  
highway; loss \$10,000.

S. C., Greenville—Plant of Van Wyck Mat-  
tress Co., 315 Hudson St.

S. C., McCormick—Residence of J. Leslie  
Jones.

S. C., Ridgeland—Ellis & Quarterman Lum-  
ber Co.'s plant; loss \$250,000.

S. C., Rock—Piggly Wiggly Grocery Store  
building; loss \$12,000.

Tenn., Bolivar—Dorris Drug Co. and G. H.  
Black Co.; loss \$25,000; O. B. Polk, 1095  
Poplar St., Memphis, owner.

Tex., Beaumont—Gas plant of Magnolia  
Refinery; loss \$250,000.

Tex., Marlin—Compress and warehouse of  
Exporters and Traders Company; loss \$250,-  
000.

Tex., Pampa—Press room and warehouse  
at Texas Elf Carbon Co.'s plant; loss \$100,-  
000.

Va., New Glasgow—Julian E. Campbell's  
corn mill at Gidesville.

W. Va., St. Albans—Carter Bros.' garage;  
loss \$15,000.

W. Va., Logan—J. T. Wyatt funeral home.

W. Va., Moundsville—J. W. Moorehead  
Bldg.; loss \$10,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Association and Fraternal

La., Shreveport—Board of Directors, Salva-  
tion Army, has low bid from Miller & Gibson,  
120 E. Lister St., Shreveport, at \$27,500 for  
construction 3-story, brick and fireproof build-  
ing, 710 Crockett St. 4-7

S. C., Columbia—Construction will start  
immediately on \$35,000 Eagles Home, 1200  
Assembly St.

#### Bank and Office

Ga., Rome—Rome Coca-Cola Co., R. Bar-  
ron, Pres., reported, plans erecting 2-story  
office bldg. adjoining plant on North Fifth  
Ave.

La., Shreveport—Eppie Heights Baptist  
Church, Rev. E. P. Smith, Pastor, plans  
building new brick veneer church building.

Tex., Austin—State Highway Comm. and  
State Bd. of Control, Claude Teer, Chmn.,  
Austin, received low bids 8-story highway  
bldg.; General contract, J. E. Morgan & Son  
Construction Co., El Paso, \$321,787; brick,  
stone and rein. conc., fireproof; A. H. Shafer,  
829 N. St. Marys St., San Antonio, heating,  
\$19,990; combination plumbing and heating,  
\$31,857; combination heating, plumbing and  
wiring, \$63,968; S. P. Osborn, 1900 Fifth Ave.,  
Fort Worth, plumbing, \$11,875. Adams &

Adams, Western National Bldg., San Antonio,  
Arch.; Lang & Witchell, 300 First Natl. Bk.  
Bldg., Dallas, Asso. Arch.; W. E. Simpson  
Co., Milam Bldg., San Antonio, Struct. Engr.;  
L. D. Royer, Smith Young Tower, San Anto-  
nio, Mech. Engr. 3-17

Tex., Dallas—Dallas Bank & Trust Co.,  
1530 Main St., plans building annex, stone  
and rein. conc., 1-story and mezzanine, sub-  
basement and basement; 50x100; stone front,  
terrazzo floors, marble interior finish, bank  
fixtures; Herbert M. Greene, LaRoche & Dahl,  
Insurance Bldg., Arch.; R. O. Jameson,  
Struct. Engr.; Chas. L. Kribs, both S. W.  
Life Bldg., Mech. Engr.

#### Churches

D. C., Georgetown, Washington—Christ  
Church, 31st and O Sts., N. W., reported, has  
low bid from W. E. Mooney Co., 2539 Penn-  
sylvania Ave., for 2-story addition to Parish  
House; 26x55; brick, stone trim, slag and  
metal roof, steel and ornamental iron work,  
steam heat, electric wiring, plumbing; Smith  
& Edwards, 1707 Eye St., Archts.

Ky., Louisville—Deer Park Baptist Church,  
Deer Park and Bardstown Road, plans con-  
struction \$10,000, 2-story brick addition for  
educational and Sunday-school work.

Okla., Oklahoma City—Crown Heights



Christian Church, Rev. Clyde S. Sherman, pastor, purchased land adjoining church; reported, plans expansion; Dr. C. S. Davis, Continental Bldg., Chrmn. Finance Comm.

### City and County

Ala., Montgomery—City, William A. Gunter, Mayor, reported, announced plans for rebuilding City Hall on old site at Monroe and North Perry Sts., recently destroyed by fire; all departments of city government will be housed in City Hall.

La., New Orleans—E. A. Christy, Supvg. Archt., Orleans Parish School Board, will prepare plans for boys' municipal home. 1-14

Okl., Oklahoma City—City, E. B. Smith, City Engr., reported, has \$56,000 available for purchase of equipment and improvements for parks, including construction of wading pools, tennis courts, baseball diamonds and shelter bldgs. 3-3

Tex., Houston—City Council has low bid from Albert Meyerson, 2119 McGregor St., at \$9455 for 1-story stone and conc. shelter house in MacGregord Park.

### Dwellings

D. C., Washington—C. H. Small & Co., 925 15th St., N. W., has permit for 2-story brick dwellings, 4413, 4420, 4424 and 4426 Fourteenth St., N. W.; cost \$25,000.

D. C., Washington—Leopold Freedman, 774 Girard St., N. W., has permit 2-story brick, tile and stone dwelling, 7300 Fourteenth St., N. W.; cost \$10,000.

D. C., Washington—Gilber Seek, 4316 Third St., N. W., has permit to erect 3 brick and tile dwellings, Seventh Place, N. W., 225 and 229 Van Buren St., N. W., cost \$7,000 each.

D. C., Washington—W. Walter Vaughn, 12th and Upshur Sts., N. E., has permit, 4 2-story brick dwellings, 1126 Upshur St., 4304 and 4306 Twelfth St. and 1125 Urell Place, N. E.; est. cost \$28,000.

D. C., Washington—W. C. & A. N. Miller, 1119 11th St., N. W., have permit, 3-story brick, stone and frame residence, 3301 University Ave., N. W.; cost \$27,500.

D. C., Washington—Carl F. Johnson has permit 2½-story stone and brick dwelling, 4505 Twenty-eighth St., N. W.; cost \$15,000.

D. C., Washington—John J. Woodward has permit two 2-story brick and frame residences, 3110 and 3114 Quebec Place, N. W.; cost \$15,500.

Fla., Miami Beach—Biscayne Association, Inc., has permit for 2 residences, 1000 and 1020 Sixteenth St.; cost \$20,000; Carlos B. Schoeppl, Archt., 528 Lincoln Rd.

Md., Baltimore—William S. Forbes, 61 Mt. Vernon St., Boston, Mass., purchased Atamascos, adjoining St. Thomas P. E. Church; reported, plans improving extensively.

Md., Baltimore—Jos. O. Blair, 3613 Grantley Rd., plans building residence, 3602 Sequola Ave.; 2-story, cinder block and stucco.

Md., McDonogh—McDonogh School, Major Lamborn, has low bid from Tilghman V. Morgan, 10 W. Fayette St., Baltimore, for brick 2½ story residence for headmaster; Eben D. Finney, 806 St. George's Rd. and care Palmer & Landin, 513 N. Charles St., Baltimore. 3-24

Md., Pikesville, Baltimore—Joseph M. C. Carter, 5800 Park Heights Ave., purchased 5 building lots on Sherwood Ave., corner, Pluvius Place; plans 5 cottages with garages.

Miss., Sardis—Sardis Methodist Church, Rev. J. M. Bradley, Pastor, let contract to George Rayburn for construction parsonage.

N. C., Morganton—R. O. Huffman, reported, plans building brick residence; est. cost \$18,000; G. N. Rhodes, 905 Selwyn Ave., Archt., Charlotte, will soon call for bids.

Tex., Cibolo—Mr. Pfel, care Pfel Lumber Co., plans building 1-story rock dwelling, est. cost \$12,000; 34x46, tile and asbestos shingle roof, oak and pine floors, rein. conc. foundation, tile bath and drainboard.

Tex., Fort Worth—B. F. Bilbert has permit for brick veneer residence, 3529 W. Seventh St.

Tex., Fort Worth—Ben Robins, 2110 Warner Road, has permit, brick veneer residence.

### Government and State

Ala., Auburn—Barge-Thompson Co., 136 Ellis St., N. E., Atlanta, Ga., bidding on U. S. post office foundation work, bids open May 3. 4-14

D. C., Washington—Following estimators, Dept. of Labor Bldg. and Interstate Commerce Comm. Bldg., bids to open May 16: R. F. Whitty Co., Denrike Bldg.; Busbom & Rauth, 1716 H St., N.W.; National Con-

struction Co., Tower Bldg.; United Construction Co., Munsey Bldg.; Bahen & Wright, 916 Rhode Island Ave., N.E.; Skinker & Garrett, 1719 Eye St., N.W., all Washington; Consolidated Engineering Co., St. Paul and Franklin Sts., Baltimore, Md.; George Wagner, 181 South Park, San Francisco, Cal.; George F. Driscoll Co., 548 Union St., Brooklyn, N. Y.; N. P. Severin Co., 222 W. Adams St.; Lakes Construction Co., 333 N. Michigan Ave.; John Griffiths & Sons, 228 N. La Salle St., Chicago, Ill.; McCloskey & Co., 1620 Thompson St., Philadelphia, Pa.; S. M. Sissel Co., 514 E. Ogden Ave., Milwaukee, Wis.; B-W Construction Co., 720 N. Wabash Ave., Chicago, Ill., and National Press Bldg., Washington, and 101 Park Ave., New York; Brader Construction Corp., 551 5th Ave.; P. J. Carlin Construction Co., 495 Lexington Ave.; Jas. Stewart & Co., 230 Park Ave., all New York; Starrett Bros. & Eken, Empire State Bldg., New York, and 1300 B St., S.W., Washington; George A. Fuller Co., 57th St. and Madison Ave., New York, Morris Bldg., Philadelphia, Pa., 111 W. Washington St., Chicago, Ill., and Munsey Bldg., Washington; Arthur Brown, Jr., San Francisco, Cal. 4-14

**Contractors, sub-contractors and suppliers of materials are urged to join in helping to stabilize the construction industry. Use the following label on all bids—It has the approval of responsible concerns:**

### IMPORTANT NOTICE

**THIS IS OUR ROCK BOTTOM BID. IT IS NOT PADDED AND WILL NOT STAND A CUT.**

D. C., Washington—Following additional estimators bidding on Department of Agriculture Bldg., bids open May 6: Theirault Contracting Co., 534 E. Johnson St.; Connen Construction Co., 770 Schuykill Ave., both Philadelphia, Pa.; W. E. O'Neill Construction Co., 308 W. Washington St.; Jacobson Bros., 19 S. LaSalle St., both Chicago, Ill.; Struck Construction Co., 147 N. Clay St., Louisville, Ky.; George F. Driscoll Co., 548 Union St., Brooklyn, N. Y.; Bahen & Wright, 916 Rhode Island Ave., N. E.; Skinker & Garrett, 1719 Eye St., N. W.; National Construction Co., Tower Bldg.; John W. Cowper Co., National Press Bldg., all Washington, D. C.; Hunkin-Conkey Construction Co., Newman Stern Bldg., Cleveland, Ohio; Aronberg-Fried Co., 155 E. 44th St., New York City, and 7th Ave. and Grant St., Pittsburgh, Pa.; Brader Construction Corp., 551 5th Ave.; Fredburn Construction Co., 60 E. 42nd St.; P. J. Carlin Construction Co., 405 Lexington Ave., all New York City; Lehig Structural Steel Co., Allentown, Pa.; S. M. Sissel Co., Flannery Bldg., Pittsburgh, and 514 E. Ogden Ave., Milwaukee, Wis.; Cogswell Construction Co., 406 Park Ave.; Consolidated Engineering Co., St. Paul and Franklin Sts., both Baltimore, Md. 4-14

Fla., Clearwater—Theodore Skinner, Archt., reported, selected as architect for post office building; est. cost \$125,000. 2-4

Fla., Fort Myers—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from Rosen & Fischel, 11 S. La Salle St., Chicago, Ill., at \$208,250 for post office building. 4-7

Fla., Jacksonville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids May 3, furnishing all labor and materials and performing all work for foundations U. S. court house; Marsh & Saxelby, Consolidated Bldg., Jacksonville, Archt. 1-14

Fla., Miami—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from Prescott-White Corp., 118 E. 28th St., New York, at \$57,711 for construction U. S. quarantine station, Fisher's Island. 4-7

La., Baton Rouge—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid for elevators for U. S. post office, Wm. A. Miller Machine and Elevator Co., 920

N. Main St., St. Louis, \$13,400.

La., New Orleans—Gervais F. Favrot, Balter Bldg., has contract at combined bid of \$21,134 for construction 1-story, stone front hollow tile post office substation F building at southside of Carrollton Ave., between Oak and Zimble and also for remodeling drug store building for Katz & Besthoff, Ltd.; plumbing and heating, Gore & Daubert, Inc., 835 Baronne St., \$3850; electrical contract, I. Alcus, 618 Adams St., \$870; painting, Gus Peterson, 730 Valence St., \$800.

Miss., Meridian—Following additional estimators on U. S. Post Office, bids open April 25: Theriault Contract Co., 534 E. Johnson St., Philadelphia, Pa.; Jas. Devault, Massillon Road, Canton, Ohio; H. B. Nelson Construction Co., Columbus, Ga.; O. M. Gwin Construction Co., 3503 Fern St.; R. P. Farnsworth & Co., Inc., Maritime Bldg., both New Orleans, La.; S. & W. Construction Co., Memphis, Tenn.; Southern Ferro Concrete Co., Atlanta Trust Co. Bldg., Atlanta, Ga.; Murch Bros. Construction Co., Railway Exchange Bldg., St. Louis, Mo.; Rogers & Leventhal, E. 11th St. and Park Ave., Chattanooga, Tenn.; Rosen & Fischel, 11 S. La Salle St., Chicago, Ill.; W. J. McGee & Son, Lamar Bldg., Jackson, Miss.; Charles Weitz's Sons, 713 Mulberry St., Des Moines, Iowa; James I. Barnes, Springfield, Ohio; Ralph Sollitt & Sons Construction Co., 518 E. Sample St., South Bend, Ind.; John Grant & Son, 3866 Carnegie Ave., Cleveland, Ohio; Newman Bros. Construction Co., Norwood, Ohio. 4-14

Mo., St. Louis—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids May 3, excavation and foundation work, \$3,000,000 U. S. court house and custom house; Mauran, Russell & Crowell, Archts., Chemical Bldg., St. Louis, Mo. 1-28

Mo., Trenton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids May 12, construction U. S. post office building, est. cost \$100,000.

S. C., Columbia—James N. Pearman, Supt. of State Prison, reported, announced that chair factory, recently destroyed by fire, will be rebuilt with convict labor with only few technical outside helpers; J. B. Urquhart, Archt., Central Union Bldg. 4-14

Tenn., Knoxville—Following additional estimators on U. S. post office building, bids open April 26: H. B. Agsten & Sons, 417 Washington St., Charleston, W. Va.; Geo. M. Eady Co., 340 Byrne St., Louisville, Ky.; Ferro Concrete Construction Co., 203 W. Third St., Cincinnati, Ohio; O. M. Gwin Construction Co., 3503 Fern St., New Orleans, La.; Fred W. Klassner, 632 Broadway, Cincinnati, Ohio; H. B. Nelson, Columbus, Ga.; John Grant & Son, 3866 Carnegie Ave., Cleveland, Ohio; Taggart & Leventhal, 22 E. 40th St., New York; Rogers & Leventhal, Box 173, Chattanooga, Tenn.; S. & W. Construction Co., Shrine Bldg., Memphis, Tenn.; A. H. Whisman, Front and Walnut Sts.; V. L. Nicholson Co., Box 661, both Knoxville, Tenn.; Raymond Concrete Pile Co., American Security Bldg., Washington. 4-14

Tex., Plainview—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids May 10, construction \$152,000 U. S. post office. 11-12

W. Va., Princeton—Following estimating U. S. post office, bids open April 26: Spence Bros., Brewer Arcade, Saginaw, Mich.; Boone, Eason & Wood, Law and Commerce Bldg., Bluefield, W. Va. 4-14

### Hospitals, Sanitoriums, Etc.

Ky., Louisville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from Hanson Bros. Co., 127 Dearborn St., Chicago, Ill., \$274,836, Marine hospital building; elevator, Wm. A. Miller Machinery & Elevator Co., 920 N. Main St., St. Louis, Mo., \$8070. 3-31

Md., Baltimore—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., has low bid from W. E. O'Neill Construction Co., 308 Washington St., Chicago, Ill., at \$809,900, to erect U. S. Marine Hospital, including wood sash and frames; has low bid from N. P. Severin Co., Chicago, Ill., at \$825,700, including steel sash and frames; main building, 7 stories, 300x240 ft., brick, powerhouse, laundry and garage, 2 stories, 175 by 75 ft. brick stack. 4-7

Md., Baltimore—City of Baltimore, Bureau of Buildings, Wm. A. Parr, Engr., Municipal Bldg., opens bids May 4 to erect general hospital building for City Hospitals, cost \$1,200,000; Palmer & Landin, Archts., 513 N. Charles St.; Van Rensselaer Saxe, struc. engr., 217 N. Calvert St.; Reeder, Elser & Akers, Mech. Engrs., 916 N. Charles St.; estimators: Charles L. Stockhausen, Inc., 33 S. Gay St.; J. Henry Miller, 405 W. Frankfort St.; Consolidated Engr. Co., 20 E. Franklin St.; Henry L. Maas & Sons, 1119 N. E. 11th St.; Price Constn. Co., Md. Trust Bldg.; Cogswell Constn. Co., 406 Park Ave.; Geo. A.

4-14  
vrot, Bal-  
ed bid of  
one front  
building at  
even Oak  
ling drug  
off, Ltd.;  
bert, Inc.,  
contract,  
ting, Gus

onal esti-  
open April  
Johnson  
Massillon  
Construct-  
win Con-  
y. Farms-  
Co., New  
ete Co.,  
; Murch  
Exchange  
eventhal,  
tanoga,  
Salle St.,  
Lamar  
's Sons,  
; James  
Sollitt &  
ple St.,  
n, 3866  
Newman  
o. 4-14

Jas. A.  
hington,  
ndation  
and cus-  
Crowell,  
1-28  
A. Wet-  
l, opens  
it office

n, Supt.  
ed that  
re, will  
ly few  
quhart,  
4-14

nal des-  
g, bids  
s, 417  
Geo. M.  
Ky.;  
03 W.  
n Con-  
reans,  
y, Cin-  
Ga.;  
Cleve-  
n, 40th  
s 173,  
uction  
A. H.  
V. L.  
xville,  
erican  
4-14

as. A.  
ngton,  
00 U.  
11-12  
nating  
pence  
Roone,  
Bldg.,  
4-14

s. A.  
gton,  
Dear-  
hos-  
Ma-  
3-31  
A.  
low  
308  
900,  
ding  
from  
700,  
uild-  
use,  
ft.,  
4-7

reau  
ipal  
hos-  
200-  
N.  
rue.  
r &  
St.;  
33  
ank-  
ank-  
En-  
g.;  
A.

Fuller Co., Cathedral and Mulberry Sts., and New York City; North-Eastern Construction Co., 6 W. Madison St.; M. A. Long Co., 10 W. Chase St.; Frainie Bros., 19 W. Franklin St. 4-14

Md., Crownsville—Crownsville State Hospital, Dr. B. P. Winterode, Supt., Dr. Geo. P. Preston, Chmn., State Lunacy Comm., 350 N. Charles St., Baltimore, has low bid from North-Eastern Construction Co., 6 W. Madison St., for construction \$200,000 Ward building, addition Hugh M. Young Psychopathic ward; 4-story, 112x51 ft., brick and conc.; Joseph Evans Sperry, Calvert Bldg., Archt.; Herman Doeelman, Baltimore Trust Bldg., Struc. Engr.; James Posey, Baltimore Trust Bldg., all Baltimore. 4-7

Tenn., Memphis—Treasury Dept., Jas. A. Wetmore, Act. Supvz. Archt., Washington, has low bid from Sjostrom & Sons, Rockford, Ill., \$168,400 for Marine Hospital. 4-7

### Hotels and Apartments

Fla., Jacksonville—Park Hotel, E. L. Stevenson, owner, reported, plans expending \$20,000 remodeling building, providing 5 stories with large one at corner of Adams and Hogan Sts.; Telfair Stockton & Co., Graham Bldg., agents; Marsh & Saxelbye, Archt., Consolidated Bldg.

Fla., Miami—Dr. Josephine Finney, 26 S. E. 2nd St., reported, plans building ultra modern club hotel, care for 500 people; est. cost \$300,000.

Tenn., Nashville—Prof. J. M. Breckenridge, 2113 Garland Ave., has permit 6 unit brick and tile apartment house, Nineteenth and Bernard St., cost \$17,100.

Va., Richmond—R. S. Peters and S. Coplan, reported, plan building apartment house; Carl Lindner, Archt., State-Planters Bank Bldg.

### Miscellaneous

Fla., Tampa—Tampa Yacht and Country Club, Commodore John O. Perry, reported, announced plans for extensive developments; including outdoor dance floor, remodeling and interior decoration work and beautification program; est. cost \$20,000.

Ga., Valdosta—Finley Machinery Co. constructing new building 65x100. See Want Section—Machinery and Supplies.

Md., Baltimore—John R. Ferguson, 2519 N. Charles St., soon ready for bids for tea room addition and swimming pool; F. Edward Tormey, Jr., 14 E. Lexington St., Archt.

Miss., Bay Springs—Jasper County, Bay Springs Consolidated School Board, office of Supt., opens bids April 30 construction new school building.

Miss., Ellisville—City, Wolford Collins, Sec. School Board, will be ready for bids last of month for construction of 1-story brick school building, est. cost \$15,000 to \$20,000; rein. conc. foundation, built-up composition roof, wood floor, sheet metal work, millwork, glazing, hardware, plumbing; E. G. Hearon & Son, Archts., Hattiesburg. 3-17

Mo., St. Louis—Crystal Lake Country Club, John G. Oehler, developer reported, has tentative plans for club building; Harris Armstrong, Archt.

Tex., Port Arthur—R. Lyles, Ch. Comm., organized to plan construction athletic stadium on Pleasure pier; est. cost \$30,000; Harvey Haines, Gen. Mgr., Chamber of Commerce.

Va., Hopewell—Hopewell Athletic Club, James A. Payne, Pres., reported, plans club building.

Va., Lynchburg—City School Board, A. L. Burger, Supt. of School, plans building 3-story building; semi-fireproof; est. cost \$72,000; Clark and Crowe, Archts., Krise Bldg.; Wiley and Wilson, Engrs., Peoples Natl. Bank Bldg., both Lynchburg. 3-31

### Schools

Ga., Doerun—Colquitt County, Doerun Dist., P. B. Watkins, Ch., opens bids May 5 for 1-story brick school building; est. cost \$15,000, equipment \$3000; brick exterior walls, built up tar and gravel roof, wood floors, composition blackboard, plastered walls, insulating boards on ceilings; 136x150; S. Ralph Fetner, 218 W. Adams St., Jacksonville, Fla., Archt. 4-14

Ga., Fitzgerald—Ben Hill County Bd. of Education, J. P. Pittman, Supt., plans erecting 3 consolidated school buildings; 5-rooms and auditorium, frame and brick construction,

composition roofing; plans by State Dept. of Education, State Capitol, Atlanta.

Ga., Hahira—Lowndes County Bd. of Education, T. J. Miley, Hahira, plans rebuilding school recently destroyed by fire; 12 rooms, and auditorium, concrete foundations, brick and frame walls, wood floors, composition roofing.

Ga., Winder—Barrow County, Bd. of Education, W. M. Holsendick, Chmn., opens bids May 3, construction 3 consolidated school buildings; each 5 rooms and auditorium; conc. foundations, brick veneer walls, 1-story, composition roofing; plans by State Dept. of Education, State Capitol, Atlanta.

Ky., Blackey—Stuart-Robinson School, W. L. Cooper, Jr., Supt., operated by Kentucky Division, Executive Com., Home Mission, Southern Presbyterian Church, recently destroyed by fire at loss of \$60,000 is being rebuilt.

Md., Annapolis—Anne Arundel County School Comms., Geo. Fox, Secy., will have plans ready for bids about April 19 for High School building at Zion; W. H. Emory, Jr., Baltimore Trust Bldg., and Buckler & Fenhagen, 325 N. Charles St., Baltimore, Asso. Archts.; est. cost \$75,000. 3-31

Mo., Thayer—City plans high school; voted bonds.

Mo., Thomasville—City plans school; voted \$17,000 bonds.

N. C., Kinston—Lenoir County School Comms., plan rebuilding Wheat Swamp consolidated school recently burned at loss of \$44,000.

Tenn., Knoxville—City School Board, re-

ported, approved expenditure of \$150,000, to replace with new fireproof building, Park City Lowry School.

### Stores

Fla., Jacksonville—Jacksonville Properties, Inc., 239 W. Adams St., reported, announced plans for constructing drive-in shopping center on Riverside Ave., extending to Stonewall St.; est. cost \$85,000; Marsh & Saxelbye, Archts., Consolidated Bldg.

La., New Orleans—See Government and State.

Fla., Sarasota—S. H. Kress & Co., 114 5th Ave., New York, advises, work deferred on store building. 4-7

Md., Baltimore—Goldenberg Inc., 601 S. Broadway, plans altering and improving store, 5508 Harford Road; est. cost, \$10,000.

Miss., Lexington—James H. Moore & Co. plan constructing store and warehouse bldg.

N. C., Winston-Salem—B. & O. Furniture Co., E. Fifth St. and Highland Ave., reported, will start work immediately on construction modern store bldg.; brick, 3 stories; electric elevators and heating plant.

Tex., Jourdanton—L. C. Gibson plans tile and stucco building; est. cost \$33,000.

### Warehouses

S. C., Woodruff—T. E. Jones Furniture purchased lot adjoining store and Charleston and Western Carolina railway; reported, plans erecting warehouse.

## BUILDING CONTRACTS AWARDED

### Bank and Office

Tex., Austin—State Highway Comm. and State Bd. of Control, Claude Teer, Chmn., Austin, let general contract 8-story highway bldg., J. E. Morgan & Sons Construction Co., 319 Texas St., El Paso, at \$321,787; Adams and Adams, Western National Bldg., San Antonio, Archts.; Lang and Mitchell, 300 First National Bank Bldg., Dallas, Asso. Archts.; W. E. Simpson Co., Milam Bldg., San Antonio, Struc. Engr.; L. D. Royer, Smith Young Tower, San Antonio, Mech. Engr. 3-17

Va., Richmond—Seventh St. Realty Corp., 708 E. Grace St., let contract remodeling office to Doyle & Russell, Central Natl. Bank Bldg.

### Churches

Fla., St. Petersburg—Temple Beth El, Henry I. Greenburg, Ch. Bldg. Comm., purchased property on Arlington Ave., North, west of Mirror Lake Drive, as site for proposed new church building.

Okla., Norman—J. H. Frederickson & Co., Baltimore Bldg., Oklahoma City, have contract for St. John's Episcopal Church building, Bishop Thos. Casady, pastor; est. cost \$25,000; brick construction, 32x120; Chas. A. Popkin, Archt., Commercial Bldg., Tulsa. 3-31

### City and County

Tex., Longview—Comms. Court, Greeg County, W. R. Hughes County Judge, let contract to C. S. Lambie & Co., Amarillo, \$194,500 construction court house and jail building; including plumbing, heating and wiring; Voelcker & Dixon, Inc., Archts., Perkins-Snyder Bldg., Wichita Falls. 4-7

### Dwellings

Fla., Miami Beach—W. L. Kelsay, care John & Coulton Skinner Archts., French Village, LeJeune Rd., Coral Gables, has permit \$25,000 residence, 1937 Meridian Ave.; Fred Howland has contract.

Fla., Miami Beach—Warren Wright, 33 N. LaSalle St., Chicago, Ill., let contract to R. W. Edholm, Inc., 835 Lincoln Road, construction \$350,000 winter residence, Collins Ave., near Fifty-second St.; rein. conc. placed on concrete piling; tile and marble floors; gas steam radiators for heating, incinerator, electric laundry; contract includes 200 feet of seawall with 75 ft. return on north side and one groin out into ocean with conc. cement walkway and railing on top. Martin L. Hampton, Archt., 2939 Indian Creek Drive, Miami Beach.

Fla., Tampa—Lem P. Woods has permit for \$12,000 2-story brick residence on Ladoga St., Davis Island; G. A. Hanson Co., Inc., 215 Madison St., Contr.; L. M. Gudger, Archt.

Md., Baltimore—Glen-Ellen Building Corp., has permit for ten 2-story brick dwellings and garages, 4633-51 Colleberne road; hot water heat; est. cost \$25,000.

Md., Baltimore—L. Wm. Weber has permit 2½-story stone dwelling and garage, 5207 Springlake Way, 41x57.9; slate roof, hot water heat; cost \$9,950; F. Edward Tormey, Jr., Archt., 2 E. Lexington St.; Younger & Riddle, Windsor Mill Rd., Woodlawn, Baltimore, Bldr.

Okla., Oklahoma City—R. W. Helmer is building new home at 2116 Twenty-sixth St., N. W.; Hopewell Fox, Contr.

Okla., Oklahoma City—S. S. Carr erecting dwelling, 2120 26th St., N. W.; R. E. Orner, Contr.

Tex., Alamo—J. C. Doedyns, San Juan, has contract at \$10,500 for residence for Carl Bressett; plumbing, Union Plumbing Co., McAllen; electric wiring, Olim Electric Co., McAllen; R. Newell Waters, Weslaco, Archts.; W. E. Simpson & Co., Milam Bldg., San Antonio, Engrs. 3-24

Tex., Eagle Lake—Harold Fitzgerald, reported, let contract to Justin Smith for 1-story, brick veneer residence; est. cost \$10,000; comp. shingle roof, pine and hardwood floors, tile bath, rein. conc. foundation; start work at once.

Tex., San Antonio—K. W. Johnston, Mary Louise Drive and Shearer Blvd. in Monticello Park, let contract to Ben. J. Hanssen, 1710 McKinley Ave., San Antonio, construction 2-story rock residence, 48x36, oak floors, conc. ples, Ludowici-Celadon tile roofing; N. Straus Nayfack, 409 Alamo National Bldg., Archt.

### Government and State

D. C., Washington—Shippers Car Line Corp., 30 Church St., New York, has contract 460 tons fabricated structural steel for addition to Library of Congress; Jacobson Brothers, 10 S. La Salle St., Chicago, Ill., Gen. Contr. 4-14

Fla., Haines City—State Quartermaster, St. Augustine, Fla., let contract to S. J. Robinson & Son for erecting armory building; 2-story, 70x90, brick veneer on steel frame; est. cost \$10,000 with \$20,000 equipment. 4-7

La., Baton Rouge—Algernon Blair, First Natl. Bank Bldg., Montgomery, has contract at \$308,700 for construction U. S. post office and courthouse bldg.; limestone exterior, 3-story and basement, brick and steel; Moise



H. Goldstein, Archt., American Bank Bldg., New Orleans. 4-14

Miss., Aberdeen—American Radiator Co., New York City, has contract tube and wall radiators, post office building; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala., Gen. Contr. 12-26

Va., Norfolk—Virginia Engineering Co., Newport News, has contract at \$210,500 for construction of foundation for \$2,000,000 U. S. postoffice building; Benj. F. Mitchell, Rudolph Cooke & Leenwen, Inc., Asso. Archt., all Arcade Bldg., Norfolk. 4-14

W. Va., Elkins—Marsh Valve Co. has contract angle radiator valves for postoffice building; P. W. Johnson, Portsmouth, Ohio, Gen. Contr. 3-24

### Hospitals, Sanitoriums, Etc.

Ga., Alto—C. A. Griffin, Hartwell, Ga., reported, has contract for construction out patients building for Georgia State Tuberculosis Hospital, Dr. M. F. Haygood; Tucker & Howell, 1711 Rhodes Haverly Bldg., Atlanta, Archts. 3-24

Miss., Clarksdale—J. S. Hawkins, Contr., reported, has contract for construction of wing to Clarksdale Hospital. 3-31

Okla., Muskogee—Chas. T. Crockett, Bethesda, Md., has heating contract existing bldgs., Veterans' Administration Hospital. 3-10

S. C., Columbia—Otis Elevator Co., 810 18th St., N. W., Washington, D. C., has elevator contract at \$6635, for \$1,300,000 Veterans Hospital, superseding contract let Feb. 5, W. S. Barstow, Gen. Contr., 417 Washington St., Reading, Pa. 3-10

### Hotels and Apartments

D. C., Washington—Young & Oppenheimer, 1709 West Virginia Ave., N.E., have permit two 2-story brick apartments, 1639 and 1611 Isherwood Place, N. E.; cost \$15,000.

Md., Baltimore—Following subcontracts let on Northway Apartment, Charles & Bishop's Road: Roofing, sheet metal, Wm. E. Cotton & Co., 1525 Lamont Ave.; hauling, George Transfer Co., Inc., 1201 S. Paca St.; lathing and plastering, John H. Hampshire, Inc., 330 W. 24th St.; tile, Maryland Lime & Cement Co., Inc., Oak & 24th St.; rough hardware, E. Scott Payne Co., 362 N. Gay St., all Baltimore; Kalamein and tin clad doors, E. H. Friedrich Co., Holyoke, Mass.; dampproofing, Hydrosol Waterproofing Co., 835 N. Third St.; sash, David Lupton's Sons Co., 2263 E. Allegheny, both Philadelphia, Pa.; exterior millwork, Oettinger Lumber Co., S. Elm St., extended, Greensboro, N. C. Price Construction Co., Md. Trust Bldg., Contr.; Palmer & Lamdin, 513 N. Charles St., Archt. 3-17

### Miscellaneous

Tex., Amarillo—C. S. Lambie Contracting Co., Paramount Theatre Bldg., reported, has general contract for basement and foundation, work for Amarillo County Club, U. N. Oliver, Pres.; 2-story, brick; est. cost \$50,000; Guy A. Carlander, Brushland Blvd., Archt. 3-24

Tex., Dallas—Dr. J. O. McReynolds, Mercantile Bank Bldg., reported, let contract to Cowdin Bros., 1820 Main St., brick business bldg., Live Oak and Harwood Sts.; est. cost \$18,000; DeWitt & Washburn, 1229 Kirby Bldg., Archt. 4-14

### Railways Stations, Sheds, Etc.

Ala., Birmingham—Louisville and Nashville R. R. Co., W. H. Courtney, Ch. Engr., Louisville, Ky., let contract for construction of new service bldg. and other work at the L & N passenger station; Foster-Creighton & Co., Protection Life Bldg., Birmingham and American Natl. Bank Bldg., Nashville, Tenn., \$52,831, service bldg.; Ball and Dyer, Electric Co., Inc., 905 S. 22nd St., electric wiring, \$14,700; Frank B. Heck Plumbing and Heating Co., 3021 Fourth Ave., S., \$2,477, heating; Morris Plumbing Co., 609 S. 53rd St., \$2,961, plumbing. 4-7

### Schools

Ga., Macon—Bibb County Bd. of School Commrs., Dr. Morgan, Chrmn., let contract to W. A. Stilwell & Sons, 98 Ingleside Ave., for construction Ingleside School building at approximately \$43,000; plumbing and heating, A. B. Lee, \$7180; wiring and fixtures contract, Macon Electric Co., 367 Second St., \$1712; W. F. Oliphant, Archt., Grand Bldg. 4-7

La., New Orleans—Lionel F. Favret, 927

Gravier St., has gen. contract at \$173,870 for construction new 3-story brick, stone trim and fire proof parochial school building for Most Holy Name of Jesus Roman Catholic Church, Cromwell Place, between Calhoun St. and Loyola University property; Rev. Father Albert Biever, S. J. Sec. Tres. and rector; plumbing, heating and ventilating contract, C. C. Hartwell Co., Ltd., 409 Dauphine St., at \$16,500; electrical work, Barnes Electric Construction Co., Ltd., 513 Gravier St., \$5,225; 24 classrooms; cafeteria; auditorium, 67x46; Rathbone Debuys, Hibernia Bank Bldg., archt., and E. A. Christy, Supvg. Archt. 1-21

La., Ville Platte—Evangeline Parish School Board opens bids May 10 for furnishing all material and constructing new Tate Cove frame school building; Herman J. Duncan and Co., Inc., Archts., 120 Murray St., Alexandria, La.

Md., Baltimore—Calvert Hall College, Rev. Brother E. Vincent, F. S. C., President, let contract for interior alteration to toilet rooms and class rooms to W. E. Armacost Co., 5611 Gist Ave.; plumbing, Chas. T. King, 1017 Cathedral St.; electrical work, Jos. H. Dreisch, 116 W. Mulberry St.; Lucien E. D. Gaudreau, 3458 Park Ave., Archt.

Tex., Austin—Following subcontracts let on Library, Physics and Union Bldg., University of Texas: Excavation, Tow Archer & Co., 308 Baurline St.; finishing tile, Jas. M. Thompson, Inc., 1728 N. Enderly Pl., both Fort Worth, Tex.; structural steel and iron, Virginia Bridge & Iron Company, Kirby Building, and Roanoke, Va.; rein. steel and mesh, Concrete Engineering Co., Construction Industries Bldg., (home office, Omaha, Neb.); acoustical treatment, R. V. Aycock Co., 2107 Griffin St., all Dallas; cork tile, rubber tile, linoleum, composition tile and rubber mats, Thos. Moulding Floor Co., Grand Central Tower, New York; marble and slate, Vermont Marble Co. of Texas, 1513 Wall St.; misc. and orna. iron and metal, Weaver Ornamental Iron Works, 1807 Carter St., all Dallas; gravel and sand, Robinson Sand and Gravel Co.; lumber and Lone Star cement, Kuntz-Sternenbert Lumber Co.; limestone for Physics and Union Bldg., Texas Quarries, Inc., all Austin; waterproofing, dampproofing and caulking, A. C. Horn Co., 2120 Polk St.; slate blackboards, Wallcott, Maisey and Paige, West Bldg., both Houston; limestone, Library, Bloomington Limestone Co., Bloomington, Ind.; millwork, Enoch Lumber and Manufacturing Co., 800 S. State St., Jackson, Miss.; metal lath and corner bead, A. Salisbury, Bldrs. Exch. Bldg., San Antonio; erection, structural steel, Walter De Feres Construction Co., St. Paul, Minn.; P. O. B. Montgomery, Construction Industries Bldg., Dallas, Tex., Gen. Contr.

Tex., Liberty—Liberty County School Bd., Joe Matlock, Pres., plans erecting \$40,000 high school building at North Tarkington to serve consolidated districts of North, East and West Tarkington and Hightower common school dist.; Corneil G. Curtis, Archt., 1637 Hawthorne St., Houston; William A. Foster, Lufkin, has tentative contract for building.

Tex., Stowell—East Chambers County Consolidated School Dist. No. 2, Mrs. Gillas, Sec., let contract to Ed. Williams, 2215 Binz St., Houston, at about \$22,500 for brick and conc. 1-sty. school building; Livesay & Wiedeman, San Jacinto, Archt., Beaumont.

### Stores

Ala., Montgomery—See Warehouses.

Ark., Pine Bluff—J. H. Culpepper, Contr., has contract \$35,000, 2-story brick bldg., 316-18 Main St. for J. J. Newberry Co., New York department store chain. 3-31

Fla., Daytona Beach—G. A. Miller Co., 312½ Twigg St., Tampa, Fla., has contract for store building for S. H. Kress & So., 114 5th Ave., New York; conc. foundations, structural steel; brick, hollow tile, terra cotta, granite, marble. 4-7

Fla., Palm Beach—Chalker & Lund, 107 W. Palm Beach Ave., Palm Beach, reported, have contract for \$22,000 brick store bldg., Clematis St., for J. C. McCrory Co., 1107 Broadway, New York; W. M. Simpson, Gen. Archt. for McCrory Stores.

Ga., Atlanta—Fulton Furniture Co., Richard A. Burnett, Pres., 152 Whitehall St., let contract to Nance E. Simpson, 1718 Boulevard Drive, N. E., to remodel store building, 123-125 Whitehall St.; 2-stories, millwork, new fronts, general interior changes.

Okla., Enid—Following sub-contracts let on store bldg. for Dr. Lee Cotton: Millwork, Enid Planing Mill; brick, Enid Vitrified Brick & Tile Co.; steel, Hackney Iron & Steel Co.; plumbing, Okla., Plumbing Co.; wiring, Storrs Electric Co., all Enid; stone, Harter Marblecrete Co., 1614 W. Main St.; glass, Pittsburgh Plate Glass Co., 101 E. California St., both Oklahoma City; Roy W.

Shaw, Enid, Archt., and D. C. Bass & Sons, Enid, Contrs.

Tex., San Angelo—Findlater Hardware Co., 207-09 S. Chadbourn St., has permit for remodeling building; est. cost \$10,000; H. F. Templeton, Contr.

### Warehouses

Ala., Montgomery—Jehle Brothers Construction Co., Shepherd Bldg., erection warehouse, store and filling station for Goodyear Service Co., Inc., at Bibb and Lee Sts.; Mrs. Betty B. Morgan, LaGrange, Ga., owner.

Md., Baltimore—C. A. Spicknal & Sons, 855 Pierce St., have contract alterations to brick warehouse Camden and Charles St., for Henderson & Linthicum, owners.

### Carded Cotton Cloth Production and Sales

An additional service to the cotton textile industry in the form of quarterly statistical reports on production, shipments and sales of carded cotton cloths is announced by the Association of Cotton Textile Merchants of New York. It provides a broader analysis than can be secured in the monthly reports.

Production during the first quarter of 1932 was 762,301,000 yards. Shipments were 793,318,000 yards, or 4 per cent above production; sales were 749,442,000 yards, or 98 per cent of production; stocks on hand decreased from 290,248,000 yards on January 1 to 259,231,000 yards on March 31, or 10.7 per cent. Unfilled orders declined from 322,039,000 yards on January 1 to 278,163,000 yards on March 31, or 13.6 per cent.

March statistics confirm recent trade comment on the hand-to-mouth character of buying in that month. Shipments were 265,675,000 yards, equivalent to 96 per cent of production for the five-week period; sales were 165,850,000 yards, or 58 per cent of production. Production was 285,252,000 yards, or at the rate of 57,050,000 yards weekly.

These statistics are compiled from data supplied by 23 groups of manufacturers and selling agents reporting to the Association of Cotton Textile Merchants of New York and the Cotton-Textile Institute, Inc. These groups report on more than 300 classifications of carded cotton cloths and represent the major portion of production of these fabrics in the United States.

### Completing Ferry Boat

Colonial Beach, Va.—Designed for operation on the Potomac River between points in St. Mary's County, Maryland, and Colonial Beach, a new double-end ferry boat is being completed at the yard of Cannon Brothers, Fishing Creek, Hoopers Island, Maryland, for J. Q. Adams, Colonial Beach. The boat is 115 feet long, 30 feet beam, to be equipped with a 135-horsepower oil engine at each end. Accommodations will be provided for transporting 25 automobiles. Mr. Adams is having a sister boat built at Norfolk.



# WANT SECTION

## THE CLASSIFICATIONS IN THIS SECTION ARE:

- |   |   |  |
|---|---|--|
| <p><b>Machinery and Supplies</b><br/>Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.</p> | <p><b>Building Materials and Equipment</b><br/>This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.</p> | <p><b>Bids Asked</b><br/>Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.</p> |
|---|---|--|
- Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.*

### Machinery and Supplies

- Bag Shaker.**—Richmond Engineering Co., Inc., R. C. Allport (Oil Handling Equipment), Brook Ave. at S. A. L. Ry., P. O. Box 514, Richmond, Va.—Wants prices and data on used bag shaker with motor.
- Culvert Manufacturing Equipment.**—North Carolina Equipment Co., A. E. Finley, 733 W. Hargett St., Raleigh, N. C.—Wants prices and data on used corrugated culvert roll, combined punch and stake riveter, and shear with corrugated blades, for making corrugated culvert pipe.
- Derrick.**—T. J. Lane Co., Springfield, Ohio.—Wants prices and data on stiff leg derrick, 60 ft. boom bucket, handling with gasoline hoist, and swinger.
- Hoists.**—Riverside Foundry & Machine Works, Inc., M. Drennan, Jr., Mgr., Palatka, Fla.—Wants prices and data on used electric hoists; 3 to 5-ton, a. c. 220-volt; or traveling crane for single L-beam.
- Lathes.**—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on used locust insulator pin and telephone bracket lathes.
- Laundry Equipment.**—C. G. Logan, Engr., U. S. Dept. of the Interior, Office of Indian Affairs, Field Service, Cherokee, N. C.—Wants prices and data on washing and pressing machines for new laundry.
- Machine Tools, Woodworking Tools, etc.**—Finley Machinery Co., W. A. Finley, Pres., (Mchy. Dealer), Valdosta, Ga.—Wants to represent manufacturers of machine tools, woodworking tools, equipment and supplies for industrial plants; will have one or more men in field at all times over Georgia and Northern Florida.
- Shoe Shop Machinery.**—C. Prosser, Johnsonville, S. C., plans opening modern shoe shop—Wants prices and data from manufacturers of shoe shop machinery.
- American Castorex Enterprise, John D. Fulton, P. O. Box 1570, Orlando, Fla.**—Wants data and prices on following for commercial tannery for rabbit furs:  
(1) Tanning Equipment  
(2) Shearing Equipment.

### Miscellaneous

- Leather.**—C. Prosser, Johnsonville, S. C.—Wants and prices from leather manufacturers; plans opening shoe repair shop.

### Bids Asked

- Airport Lighting System.**—Dept. of Commerce, W. S. Erwin, Ch. Div. of Purchases and Sales, Washington, D. C.—Bids May 9 for installing lighting facilities on Amarillo-Tulsa section of Amarillo-St. Louis Airway; work consists of installing about 27 standard always electric rotation beacons, together with other appurtenances and accessories between Amarillo, Tex., and Tulsa, Okla., via Oklahoma City, Okla., distance of 350 miles; 5 of rotating beacons will be installed at intermediate landing fields together with boundary lighting system; certain of equipment to be furnished by Government.
- Bridges.**—State of Maryland, 2 bridges. Construction News—Bridges, Culverts and Viaducts.
- Bridges.**—State of Texas, 3 bridges. See Construction News—Roads, Streets and Paving.
- Bridges.**—State of Oklahoma, 2 bridge projects. See Construction News—Roads, Streets and Paving.
- Building Repairs.**—Purchase Section, Bureau of Standards, Washington, D. C.—Bids April 26 for making alterations and reconditioning basement room in kiln bldg.
- Castings.**—Dist. Comms., Dist. Bldg., Washington, D. C.—Bids May 2 for iron furnace castings, fittings and all other material for installation in furnaces.

- Chairs.**—Dist. Comms., Dist. Bldg., Washington, D. C.—Bids May 6 for 1500 assembly hall chairs for use by public schools.

- Coal.**—Purchasing Officer, Dept. of the Interior, Washington, D. C.—Bids May 3 for coal during next fiscal year for various deliveries to Indian agencies.

- Coal.**—Norfolk & Western Ry. Co., Clyde Cooke, Pur. Agt., Room 351, N. & W. Ry. Bldg., Roanoke, Va.—Bids April 27 for approx. 216,000 tons more or less of coal, Contract, Serial AA-622.

- Conduit.**—City of Cumberland, Md., Henry W. Schaidt, City Engr.—Bids April 25 for renewal and extension of Greene St. run conduit under Thompson Ave.; work includes construction conc. conduit, 122 ft. long, 34 cu. yd. conc. and 1 manhole.

- Creosoted Piling.**—U. S. Engr. Office, Vicksburg, Miss.—Bids April 26 for creosoted piling, 80 ft., 70 ft., 45 ft.

- Electric Distribution System.**—War Dept., Office of Q. M., Fort Moultrie, S. C., P. O. Charleston—Bids May 10 for constructing electric distribution and street lighting system and installation of electric ranges; plans \$10.

- Earthwork.**—Petersburg, Va. See Construction News—Miscellaneous Construction.

- Elevator.**—Supvg. Archt., Treasury Dept., Washington, D. C.—Bids May 6 for elevators in Dept. of Agriculture, extensible bldg.

- Engine Generator Sets.**—Div. of Purchases and Sales, Dept. of Commerce, Washington, D. C.—Bids April 25 for 10 to 30 engine generator units.

- Fence and Gates.**—U. S. Veterans' Administration Bureau, Washington, D. C.—Bids April 26 for chain link gates at U. S. Veterans' Hospital, Tuscaloosa, Ala.

- Finishing Hardware.**—Office of the Architect of the Capitol, David Lynn, Washington, D. C.—Bids May 10 for finishing hardware for new U. S. Supreme Court Bldg., Washington; \$100 deposit for drawings and specifications.

- Fountain.**—Custodian, U. S. Post Office, Goldsboro, N. C.—Bids May 2 for electric drinking fountain.

- Grading.**—Washington, D. C. See Construction News—Roads, Streets and Paving.

- Hardware, etc.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 25 for hardware, etc., delivery Quantico, Va.

- Highway Signs.**—State Dept. of Highways, Richmond, Va.—Bids May 3 for 1105 white crystal button type reflector highway signs.

- House Moving, etc.**—C. R. McMillan, Central Division Engr., State Highway Comsn., 1226 Sumter St., Columbia, S. C.—Bids May 2 for moving houses and other structures off right-of-way of Route 19, Proj. 258, etc., Edgefield, Saluda and Newberry Counties; 7 buildings and 2 gas pumps and tanks.

- Kitchen Equipment, etc.**—Purchasing Officer, Dept. of the Interior, care U. S. Indian Warehouse, St. Louis, Mo.—Bids May 10 for miscellaneous kitchen equipment.

- Kitchen Equipment.**—Constructing Quartermaster, Barksdale Field, Shreveport, La.—Bids April 26 for 12 gas ranges, 7 spreader plates and 7 high shelves.

- Lighting Fixtures.**—Treasury Dept., Office of Supvg. Archt., Washington, D. C.—Bids May 11 for furnishing and installing interior lighting fixtures at U. S. Public Health Service Bldg., Washington.

- Lighthouse Tender Repairs.**—Supt. of Lighthouses, Charleston, S. C.—Bids April 26 for docking and repairing tender Mangrove.

- Lumber.**—U. S. Engr. Office, Huntington, W. Va.—Bids April 26 for lumber; Northern white oak "select" car stock, furnished rough.

- Motor Truck.**—U. S. Coast Guard Headquarters, Washington, D. C.—Bids April 25 for motor truck, 1000 lb. pay load capacity.

- Motors.**—Pur. Agt., Post Office Dept., Washington, D. C.—Bids April 27 for 325 1/4 h.p. motors.

- Oil Engine Repairs.**—City, M. P. Johnson, Clerk, Leland, Miss.—Bids May 3 for re boring 4 cylinders on 16x20 Fairbanks Morse Diesel oil engine, furnishing pistons, weighed and balanced, furnishing 4 new fuel injection pumps, 4 new cam rollers, new valves and springs for scavenger pump.

- Paper Baler.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 25 for paper baler, delivery Quantico, Va.

- Pipe.**—Dist. Comms., Dist. Bldg., Washington, D. C.—Bids May 2 for 6 to 24-in. terra cotta pipe, Y branches, sewer bends and 6-in. stoppers.

- Plumbing.**—Treasury Dept., Office of Supvg. Archt., Washington, D. C.—Bids May 10 for replacing present galv. fittings on old hot water piping with new brass fittings at U. S. post office and court house, Richmond, Va.

- Road Materials.**—Baltimore, Md. See Construction News—Roads, Streets and Paving.

- Roads.**—State of Oklahoma, 2 roads. See Construction News—Roads, Streets and Paving.

- Road.**—Petersburg, Va. See Construction News—Roads, Streets and Paving.

- Roads.**—St. Louis, Mo. See Construction News—Roads, Streets and Paving.

- Roads.**—State of Texas, 23 roads. See Construction News—Roads, Streets and Paving.

- Roads.**—Fort Myer, Va. See Construction News—Roads, Streets and Paving.

- Roads.**—State of Maryland, 5 roads. See Construction News—Roads, Streets and Paving.

- Roof Work.**—Custodian, U. S. Post Office, Hopkinsville, Ky.—Bids May 2 for roof repairs.

- Sand and Gravel Pumps.**—U. S. Engr. Office, P. O. Box 97, Memphis, Tenn.—Bids May 6 for three 15-in. sand and gravel pumps.

- Searchlight.**—U. S. Engr. Office, Huntington, W. Va.—Bids April 25 for searchlight.

- Sewer Construction.**—Dist. Comms., Washington, D. C.—Bids April 26 for constructing 9915 ft. of 4 ft. 6-in. diam. sewer.

- Shed and Warehouse.**—Richmond, Va. See Construction News—Miscellaneous Construction.

- Steel Shelving.**—Constructing Quartermaster, Q. M. Corps, Fort Bragg, N. C.—Bids April 27 for steel shelving in post hospital.

- Streets.**—Baltimore, Md. See Construction News—Roads, Streets and Paving.

- Streets.**—Richmond, Va. See Construction News—Roads, Streets and Paving.

- Tanks.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 27 for fuel oil tanks, f. o. b. factory.

- Tank and Tower.**—City of Tallahassee, Fla., Wm. R. Galt, City Mgr.—Bids May 31, change of date, for furnishing and erecting on foundations furnished by city 400,000-gal. elevated steel water tank on steel tower.

- Tools, Brass Pipe, Telephones.**—Quartermaster, Marine Corps, Washington, D. C.—Bids April 27 for tools. Sch. 798.

- Trucks.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids April 29 for 20 1/2-ton trucks, delivery Philadelphia, Pa.

- Twine.**—Pur. Agt., Post Office Dept., Washington, D. C.—Bids May 5 for 1,600,000 lb. julite twine or 1,600,000 lb. cotton twine.

- Water Supply System.**—Bd. of Awards Leon Small, Water Engr., Baltimore, Md.—Bids April 27 for furnishing and erecting pumping equipment for Towson Automatic Pumping Station, funds for work allotted by Public Improvement Comsn.

**X-Ray Supplies.**—Div. of Supply, Treasury Dept., Washington, D. C.—Bids April 27 for X-ray supplies.

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until dates indicated, delivery as indicated, for following:

**Lathe**—engine, geared head, motor driven, Mare Island, Calif., April 26

**Oil and Grease Cups**—various east and west coast points, April 26

**Cheesecloth**—unbleached, various east and west coast points, April 26

**Felt**—hair, various east and west coast points, April 26

**Bricks**—diatomaceous, Norfolk, Va., and Mare Island, Calif., April 26

**Titanium Tetrachloride**—8000 lb., Mare Island, Calif., April 26

**Lubricating Oils**—various east and west coast points, May 3

**Lubricating Grease**—mineral and graphite, various east and west coast points, April 26

**Motor Trucks**—Brooklyn, N. Y., and San Diego, Calif., April 26

**Bronze Powder**—aluminum, 8000 lb., Mare Island, Calif., April 26

**Burlap**—jute, various east and west coast points, May 3

**Towels**—Brooklyn, N. Y., May 3

**Hose**—flexible-metallic, Brooklyn, N. Y., April 26

**Table Napkins**—linen, 36,000, Brooklyn, N. Y., May 17

**Blankets**—white, various east and west coast points, May 3

**Gasoline Hose**—rubber-metal, various east and west coast points, May 3

**Lubricating Oils**—various east and west coast points, May 3

**Attachment Plugs**—various east and west coast points, May 3

**Pressure Indicators**—5, various east and west coast points, April 26

**Pipe Covering (Magnesia)**—block, plaster, asbestos millboard, asbestos felt, various east and west coast points, May 3

**Brass Wire**—copper and steel, various east and west coast points, May 3

**Vacuum Tubes**—120, Brooklyn, N. Y., and Mare Island, Calif., April 26

**Insulators**—transmitters, f.o.b. contractors' works, 65, April 26

**Bomb Racks**—450, Philadelphia, Pa., May 3

**Cotton**—1,000,000 lb. cotton, for smokeless powder, White Plains, Md., April 26

**Flashlights**—various east and west coast points, May 3

**Vacuum Tubes**—transmitting—Brooklyn, N. Y., and Mare Island, Calif., May 3

**Vacuum Tubes**—various east and west coast points, May 3

**Reducing Valves**—corrosion resisting steel, Brooklyn, N. Y., April 26

**Sheets**—sheeting and pillow cases, various east and west coast points, May 3

**Hose (Rubber)**—cotton and linen, various east and west coast points, May 3

**Bar Steel**—Boston, Mass., April 26

**Calcium Carbide**—100,000 lb., Philadelphia, Pa., April 26

**Master Log Equipment and Spare Parts**—Philadelphia, Pa., May 3

**Turpentine**—8000 gal., Norfolk, Va., April 26

**Wire Rope**—and seizing strand, various east and west coast points, May 3

**Rollers**—turret, steel, various east and west coast points, May 3

**Acetylene Compressor**—Norfolk, Va., April 26

**Electric Cable**—1200 ft., insulated, New Orleans, La., April 26

**Soap Powder**—164,000 lb., New York, or San Francisco, May 3

**Tape**—friction and insulating, rubber, various east and west coast points, May 3

**Circuit Breakers**—Philadelphia, Pa., and Mare Island, Calif., May 3.

Office of Gen. Pur. Officer, Panama Canal, Washington, D. C.—Bids May 11 for following, Sch. 2746:

Material and equipment for jacking and rolling system for repairing miter gate bearings of canal locks; also pump unit, flexible copper pipe and forged steel pipe fittings.

Office of Gen. Pur. Officer, Panama Canal, Washington, D. C.—Bids May 3 for following, Sch. 2745:

Structural steel, sheet iron or steel, plate steel, steel bars and flats, floor plates, wire rope, power lawn mowers, oil tanks, steam boilers, garbage cans, wrought-iron or steel pipe, cast-iron pipe fittings, vitrified-clay sewer pipe and fittings, machine bolts, casting brushes, foundry coke, asphalt-prepared roofing, calcium chloride, manila tags, lumber (white pine, sugar pine, cypress, white ash, Port Oxford cedar, maple and poplar).

**Aluminumware**—April 28

**Chairmats**—April 26

**Steel Beds and Springs**—for nurses' quarters, May 2.

Procurement Div., Veterans' Administration, Washington, D. C.—Bids until dates indicated for following during 6 or 12 months' period:

**Addressograph Ribbons**—April 25

**Tray Holders**—April 26

**Waste Receptacles**—April 25

**Book Trucks**—April 26

**Andirons and Fire Sets**—April 26

**Serving Tables**—April 27

**Tray Carts**—electrically heated, April 27

**Lockers**—April 27

**Auditorium Chairs**—April 28

Procurement Div., Veterans' Administration, Washington, D. C.—Bids until dates indicated for:

**Laundry Presses**—6, April 27

**Surgical Instruments**—including elevators, forceps, curettes, etc., April 25

**Instrument Sterilizer**—April 27

**Nurses' Desks**—April 27

**Binocular Microscopes**—2, April 25.

Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids May 6 for following, Sch. 2747:

Marble chips, brass dividing strips, floor and wall tile, enameled brick and vitreous china drinking fountains.

## INDUSTRIAL NEWS

### Ervin Heads Mackintosh-Hemphill

Col. J. S. Ervin has been elected president and member of the board of directors of the Mackintosh-Hemphill Company, Pittsburgh, Pa., builders of rolling mills for all types of metal. An engineer by training, Col. Ervin has spent his entire business life in sales work, recently serving as vice-president in charge of sales for a large company engaged in processing steel structural materials. Other officers elected include: F. Hughes Moyer, vice-president and senior engineering officer, formerly chief engineer in succession of Illinois Steel's Gary plant, Bethlehem Steel's Johnstown plant and Carnegie Steel's Clairton plant; H. E. Field, vice-president, formerly president of Wheeling Mold and Foundry Company and vice-president of Continental Roll and Steel Foundry Company; F. C. T. Daniels, chief metallurgist and research engineer; Donald H. Baum, secretary; W. C. Rice, treasurer; C. Howard Paul, assistant treasurer, and J. R. Patterson, divisional sales manager.

### D-N Corporation Changes

The D-N Corporation, designers of municipal sanitation, and refuse incinerators and sewage disposal systems, announce that their Winston-Salem, N. C., office has been discontinued and that their present address is 342 Madison avenue, New York. However, the corporation plans to move to the Commerce Building the first of May. F. L. Fruyn, vice-president of the company, has been elected president to succeed Mr. Shemwell who has resigned; W. L. Crawford, vice-president, remains in that position, and J. R. Breuchaud succeeds William C. Key as treasurer, the latter also having resigned. J. B. Goldsborough is secretary of the corporation.

### Automatic Roll-Over Scrapers

The LaPlant-Choate Manufacturing Co., Inc., Cedar Rapids, Iowa, recently acquired the license to manufacture Automatic Roll-Over Scrapers under Reynolds patents. The scrapers are built in five sizes with the following capacities: 18 cubic feet, 22 cubic feet, 27 cubic feet, 42 cubic feet and 56 cubic feet, for use with models Fifteen, Twenty-Five, Thirty-Five, Fifty and Sixty-Five "Caterpillar" tractors, respectively. Of great strength, and simple in design, with light draft and long life characteristics, the scrapers have found wide application. They are one-man operated.

### Kelvinator Prices Reduced

The Kelvinator Corporation Detroit, Mich., announces price reductions on all of its 17 domestic models and on commercial condensing units, ranging up to \$100 on the larger models. Greater volume and turnover are expected to compensate for the reductions.

### General Electric Company

The 40th annual report of the General Electric Company, covering the year 1931, shows profits available for dividends amounting to \$40,956,996, equivalent to \$1.33 a share on 28,845,927 shares of no par value common stock, after dividends on special stock, compared with \$57,490,915 in 1930, or \$1.90 a share on the same number of shares. Dividends of 60 cents per share on special stock and \$1.60 per share on common stock amounted to \$48,725,262 for 1931, resulting in a deficit of \$7,768,266, which was taken from surplus, leaving a balance in surplus on December 31, 1931, of \$172,198,374.

The company received orders in 1931 amounting to \$252,021,496, compared with \$341,820,312 in 1930, a decrease of 26 per cent. Unfilled orders totaled \$49,308,000 at the end of 1931, compared with \$56,062,000 at the end of 1930, a decrease of 12 per cent. Sales billed for 1931 were \$263,275,255, compared with \$376,167,428 in 1930, a decrease of 30 per cent. Net income from sales amounted to \$28,390,883 in 1931, compared with \$40,450,261 in 1930, a decrease of 29 per cent.

In 1931 the company expended approximately \$9,600,000 on manufacturing plant, or \$3,966,000 less than in the preceding year, the plant being carried at a net book value of \$46,061,019 at the end of 1931. Investments in associated companies and miscellaneous securities were increased by \$17,782,549 in 1931, and amounted to \$222,592,877 before revaluation. By reappraisal, this was reduced to \$179,308,010, the decrease resulting from revaluation being charged in part to the general reserve and to other reserves set aside from earnings of previous years.

Inventories, after deducting reserves, are carried at \$57,335,499, compared with \$60,063,419 at the end of 1930, a decrease of 4.3 per cent. Working capital amounted to \$190,603,723 at the close of 1931, compared with \$201,961,098 at the close of 1930, a decrease of \$11,357,376.

During 13 months, from December 1, 1930, to December 31, 1931, while the emergency unemployment plan of the company was in effect, employees of the company contributed \$1,110,000 to the relief fund and the company contributed an equal amount, making a total with interest of \$2,255,756. Disbursements up to November 1, 1931, under that plan, and during November and December under the new employment guarantee plan, to some 19,000 employees, amounted to \$1,357,481. The average number of General Electric employees in 1931 was 65,516, compared with 78,880 during 1930. A total of 144 homes, valued at \$1,010,000, was acquired in 1931 by employees under the Home Ownership Plan of the company, and in the last 8 years 2706 homes valued at \$20,000,000 were so acquired. Thirty-eight employees of the company received awards of merit in 1931 under the Charles A. Coffin Foundation established by the company in 1922.



### Hopper Cars for Cement

Orders have been placed with the Pennsylvania Railroad's Enola steel car shops at Harrisburg, Pa., for remodeling 25 additional standard hopper cars for the special purpose of hauling cement in bulk. New parts will be made at the railroad's Altoona Works. The car is made waterproof, with 8 small hatches in the steel roof, through which cement is loaded, and drop bottoms are slightly changed to permit cement to be conveniently drawn out without wastage. The cars have a capacity of 50 tons.

### Using Underwater Torch

Officials of the Sewerage and Water Board, New Orleans, are using a New Orleans-built underwater torch to cut steel pipes, 9 inches in diameter, and lying 18 feet beneath the surface, in preparation for installation of new pumping equipment at the Plaquemine-Jefferson Drainage District pumping station. Of the electric-oxygen type, the torch is similar to other welding and cutting torches, with a special electrical spark attachment, however, to keep the oxygen flame burning steadily under water.

## Trade Literature

**Standard Steel Buildings.**—The International Derrick & Equipment Co., Columbus, Ohio, subsidiary of International-Stacey Corporation, Columbus, has issued a new catalog on "Ideco" Standard Steel Buildings, outlining in brief detail and by illustration the outstanding and exclusive features of these units. Southern offices of International Derrick are located in Beaumont, Dallas, Fort Worth and Houston, Texas, and in Tulsa, Okla.

**Mystery Radio Program.**—The Electric Refrigeration Department of the General Electric Company, Hanna Building, Cleveland, Ohio, announces a \$5000 Mystery Radio program, based on a mystery book, "The House of Retrogression," by Chann Patrick and published by the Jacobsen Publishing Company, Inc., New York. First prize in the contest is a \$500 General Electric refrigerator and second prize a General Electric Hot-point range. Other prizes valued at more than \$4000 will include practically every General Electric household appliance. The contest closes May 7.

**Single-Pass Boiler Installation.**—Copies of an article describing a new steam generating unit comprising one of the largest single-pass, sectional-header boilers ever installed, together with an all-water-cooled furnace equipped for horizontal firing of pulverized fuel, recently placed in operation at the Duluth station of the Minnesota Power & Light Company are available from the Combustion Engineering Corporation, New York. The article is by A. H. Krauss, of the engineering department of Electric Bond and Share Company, New York.

**Safe and Lock Protection.**—The Diebold Safe & Lock Co., Canton, Ohio, is distributing a folder devoted to the new Diebold Electric Rekordesek Safe, described as assuring 24-hour protection for vertical card record systems. The company is also distributing folders on Diebold Tellers' Safety Locker and the new Diebold Space Saving Safe.

**Metal Statistics 1932.**—The American Metal Market Co., New York, announces the publication of Metal Statistics, 1932, the 25th annual edition of Metal Statistics, which completes a quarter century of statistical service to the ferrous and non-ferrous metal and allied industries. The publication is a volume of more than 500 pages and covers in detail the record of production, consumption, imports, exports, stocks, price fluctuations and averages, data on economic subjects and information on miscellaneous items, such as specifications, grades, brands, analyses, trade terms, custom duties, etc., applying to ferrous and non-ferrous metal products and raw materials. The price of the book is \$2.00.

**Wire-Rope Construction.**—A reprint of an article appearing in the Engineering News-Record of February 25, on "How Wire-Rope Construction Affects Selection," is now being distributed. The article is by A. S. Rairden, chief engineer, American Cable Company, Inc., New York; it considers in detail important physical characteristics of wire-rope types, methods of manufacture and factors influencing selection of wire-rope for various applications.

**Manganar Rose Dust.**—The Grasselli Chemical Co., Inc., Cleveland, Ohio, is distributing a folder on Manganar Rose Dust, declared to be an efficient control for black spot, mildew and leaf-eating insects. Copies of the folder may be obtained from the company, which maintains Southern branch offices and warehouses in Birmingham, Charlotte, New Orleans and St. Louis.

**Tanks.**—Littleford Bros., Cincinnati, Ohio, have issued a booklet devoted to tanks of their manufacture, including special tanks for manufacturers of chemicals, fertilizer, glue and gelatin, paint, varnish, lacquer, ink, soap and paper, etc., and for the oil and fat industries.

**Stationary Diesel Engines.**—The Cooper-Bessemer Corporation, Mount Vernon, Ohio, is distributing a bulletin on Stationary Type Diesel Engines, covering types EP-S and FP-S, 3, 4, 5, 6 and 8 cylinder combinations. The publication presents in detail outstanding features of these engines, with illustrations, tables of dimensions, etc.

### Materials Handling Institute to Meet in Detroit

A meeting of the Materials Handling Institute, in connection with what is generally known as the Three M Congress (Management, Maintenance and Materials) will be held in Detroit, May 4-5, at the Hotel Statler. In session at that time will be the American Foundrymen's Association, the Hoist Builders Association and groups of the A S M E and the Waste Elimination Section of the A S M E.

The tentative program includes among other topics the following:

"Maintenance of Materials Handling Foundry Equipment," T. A. Bissell, associate editor, "Maintenance Engineering"; "Relative Wear of Metals by Abrasion," C. R. Weiss, chief engineer, Link Belt Co., Indianapolis; "Management Policies and Practices in a Continuous Production Grey Iron Foundry," W. G. Reichert, metallurgical engineer, Singer Mfg. Co., Elizabethport, N. J.; "Knowledge of Markets and Its Effect on Product Design," Prof. R. F. Elder, assistant professor of marketing, Massachusetts Institute of Technology; "International Trade of the United States," by George Quisenberry, editor, the American Automobile, New York; "Plant Layout by Products Instead of by Parts," by Louis Berg, manager of manufacture, A. C. Spark Plug Co., Flint, Mich.

The Waste Elimination Symposium includes:

"Elimination of Waste in Foundry," E. S. Carman, past president, A. S. M. E., consulting engineer, Cleveland, Ohio; "Savings by Substitution of Other Materials," George Bangs, Nassau Smelting & Refining Co., New York; "Common Savings in Shop Wastes," C. B. Hall, stores manager, Pennsylvania Railroad Co.; "Weekly Accounting of Waste," S. K. Cooper, manager, Inspection and Con-

trol Dept., Johns Manville, Manville, N. J.

The Materials Handling Session includes the following:

Report on Performance Standards of Locomotive and Crawler Type Cranes and Shovels, by F. A. Smythe, Pres., Thew Shovel Co.

Report on Capacity of Containers, by W. E. Farrell, Pres., Easton Car and Construction Co.

Report on Nomenclature and Classification of Materials Handling Equipment, by Geo. L. Morehead, V. P., Link-Belt Co.

Report on Materials Handling Lectures and Meetings in Colleges, by Matthew W. Potts, Alvey-Ferguson Co., and C. B. Crockett, Crockett & Smith.

Moving pictures and stereopticon views of materials handling will be shown.

John R. Booker is chairman of the publicity and educational committee of the Materials Handling Institute, at Wickliffe, Ohio.

### Rail Mill Reopening to Provide Jobs for 1000 Men

Birmingham, Ala.—The Ensley rail mill of the Tennessee Coal, Iron & Railroad Co. has been prepared for reopening, and when production gets under way 1000 men will be put back to work. Opening of the rail mill will necessitate the operation of five open hearth furnaces and possibly two blast furnaces. The production schedule will be so arranged as to permit operation of the mill as long as possible on the tonnage on hand. The mill was closed down on March 2, after having been in operation for about two months.



## TALC REFINING PLANT FOR GEORGIA

New Enterprise Established at Chatsworth  
Uses Electrochemical Process

Chatsworth, Ga.—A new plant for refining a low grade talc rock by a recently developed electro-chemical process has been established at Chatsworth, by the Moss Chemical Co., headed by Wade Moss, Jr., Atlanta, nationally known chemist. The new process invented by Mr. Moss and associates, is claimed to produce a white, fluffy talc, equal in quality to the finest imported Italian talc, now extensively used in the manufacture of cosmetics and other products requiring high grade talc. The Chatsworth plant, in the mountains near the Tennessee state line, is said to be capable of producing 60 tons of the finished product weekly. At present the plant is operating on an experimental basis, with commercial production expected to start in the near future; rapid expansion of the plant is contemplated.

The method of refining the talc is based on several chemical and electrical processes, the rock being first ground to a fine powder and "blunged" or mixed with water, after which sand and grit are removed by centrifugal process. Further refining is accomplished by treating the mixture with chemicals and by passing a direct electric current through it. Finally it is filtered and only pure talc remains. Impurities found in the Georgia deposits are iron, nickel, lime, calcium chloride, calcium carbonate, magnesium oxide, iron oxide and others.

The industry was brought to Georgia chiefly as a result of surveys made by the industrial department of the Georgia Power Company, Atlanta, engineers of the company bringing to the attention of the Moss interests possible savings in transportation costs by locating a plant near the mines. A further inducement was an abundant supply of electric power. Georgia Power Company engineers acted in an advisory capacity in the selection and installation of electrical equipment. General offices of the Moss company are at Dalton, Ga.

## Chicago-New Orleans Barge Service

New Orleans, La.—Barge service is expected to be inaugurated next spring between Chicago and Great Lake points and New Orleans, according to Major-General T. Q. Ashburn, chairman of the board of Inland Waterways Corporation, Washington. This will be made possible by dredging 16 miles in the link below Chicago and utilizing new type shallow-draft, low clearance craft. Tentative

plans have already been drawn, it is said, for light-draft towboats, with deck equipment designed to pass under bridges of only 14½ feet clearance. Utilization of these special boats would save Chicago \$16,000,000, it is estimated, which would have to be expended to raise bridge clearances.

## Gas Fuel for Electrical Generation

A particularly significant development in utilization of natural gas is its growing use in the generation of steam-electric power. Consumption of natural gas in steam-electric plants showed a gain of more than 160 per cent in the 11-year period ending with 1930, the American Gas Association reports. This phase of utilization is well exemplified by the situation in Southern California, which is served with electricity by the Southern California Edison Co. A few years ago most of the steam-powered generating plants in that territory were considered as stand-by units for the hydro-electric systems, but this position has now been practically reversed, as a result of the discovery of enormous reserves of natural gas and due also to the development of methods of comparatively cheap transmission.

Two factors, improvement in steam plant efficiency and availability of natural gas as a fuel, are responsible for the present tendency toward steam-electric generation, say well-informed observers. Moreover, in the territory served by the Edison Company the demand for gas for domestic use is high in winter and low in summer, whereas the electric load is high in summer and low in winter. Also, there is more stream-flow hydro-electric power available in the winter months in Southern California.

The Long Beach plant of the Southern California Edison Co. is the largest central steam-electric generating plant west of Chicago, and with unit 12, now under construction, its capacity will be increased to 515,000 kilowatts, or 690,000 horsepower. Natural gas is brought from Kettleman Hills, a distance of 213 miles, through a 26-inch pipe which has a capacity of 130,000,000 cubic feet in 24 hours.

With the extension of gas pipe lines from Louisiana and Texas fields through the South and Southeast, several utilities are using natural gas as a fuel under boilers in electric power plants. Also, some of the large Southern industries near main gas-transmission lines are generating power with gas fired boilers, and at least one company has built a privately-owned gas pipe line on its own right-of-way to supply its fuel requirements for power generation.

## Savings Through Standardization

Twenty-five major economies and benefits resulting from standardization of purchases are listed in a report on the Detroit Edison Company by the American Standards Association, New York. The author of the report, F. M. Price, editor of the Standards Catalog of Detroit Edison, tells how the company has applied standardization to the purchase of over 65,000 different types of materials and equipment. While applicable specifically to public utilities it points out ways in which other industries can effect a saving through standardization, such as:

Reduction of excessive stocks of materials and replacement parts

Reduction of number of items carried in stock

Elimination of slow-moving and stagnant stock items

Minimizing "private stocks" of material and supplies

Reduction and prevention of duplication of stock items

Reduction of number of different sizes and varieties of each item

Fewer specially designed items

Orderly introduction of new material

Orderly retirement of obsolete material

Elimination of items too good for the job

Reduction of trade-named items

Less lost motion in purchasing and requisitioning

Fewer incorrect shipments of goods

Less time lost in shipment

Fewer purchase orders

Well-regulated buying of definite quantities of stock items at periodic intervals

More general quantity buying

Greater latitude afforded buyer because of a wider use of proper terminology for items

Buyer is enabled to know exactly what he is buying

Establishment of standard nomenclature and adequate specifications

Fewer discrepancies in inventories

Correct descriptions on purchase orders

Real inspection of materials is made possible

Reduction of bookkeeping

Establishment of a classification of materials and equipment for all departments.

Mr. Price cites numerous specific examples of savings in his own company. A net saving of 25 per cent over the previous cost of outlet boxes by reducing types and sizes from 41 to 6; standardization of its trolley cord permitted the company to save \$1000 a year on this one item; a saving in cost of nearly 50 per cent was made by standardizing fire extinguisher liquid, and even the purchase of pills for the company's medical department was placed on a standardized basis with a saving of 70 per cent.

**WE MAKE A SPECIALTY OF  
HIGH GRADE GREY IRON AND  
SEMI-STEEL CASTINGS**

All Kinds of Machine Work. Special Machines Made to Order.  
Prices Will Suit You. Prompt Service.

Salem Foundry & Machine Works Salem, Va.

**The Cincinnati Steel Castings Co.**

Electric Process  
OFFICE AND WORKS

Spring Grove, Alabama and Bates Avenues  
Cincinnati, Ohio

**ALLOY IRON & STEEL CASTINGS**

**ELECTRIC STEEL CASTINGS**

Weighing from 1 lb. to 500 lbs. each

Quantity Production A Specialty Nickel, Chrome and Other Alloy  
Quick Delivery Inquiries Solicited

**CRUCIBLE STEEL CASTING COMPANY**  
LANSDOWNE, DELAWARE COUNTY, PA.

**GALVANIZING** HOT DIPPED  
PROCESS

The largest job galvanizing plant in the United States  
GALVANIZED PRODUCTS FURNISHED

**JOSEPH P. CATTIE & BROTHERS**

PHILADELPHIA, PA.

Designers and Fabricators of  
Hot Galvanized Steel Structures  
**Transmission and Radio Towers**  
**Substation Structures**  
**Standard Poles**  
Quotations on request  
**Bessemer Galvanizing Works**  
Bessemer, Alabama

**EARLE** Cut Spur, Bevel, Herringbone,  
and Worm Gears  
All sizes. Every description. Oper-  
ating Machinery for Bridges, etc.  
"Lee Simplex" Cold Metal Saws.  
The Earle Gear & Machine Co.  
4719 Stenton Ave.,  
Philadelphia, Pa.  
110 State St. Boston, Mass.  
95 Liberty St., New York City

**GEARS**

**CONTRACT MACHINE WORK**

Parts and Complete Machines  
Heat Treating and Grinding

Mail blue prints for quotations

**GENERAL MACHINE WORKS**  
YORK, PA.

**ALLIS-CHALMERS MFG. CO.**

MILWAUKEE, WIS., U. S. A.

DESIGNERS AND BUILDERS OF

Steam Turbines, Electrical Machinery, Steam, Gas  
and Oil Engines, Centrifugal Pumps, Crushing  
& Cement Machinery, Etc.

# Resurfacing A State Highway With Brick



SOMETHING has to be done with a road when weathering action and traffic wear boost upkeep costs and interfere with travel.

When this happens the practical thing to do is resurface with brick.

An old pavement makes a good base. Underneath it is a settled subgrade that, undisturbed, is a valuable asset. With a minimum of cost the old pavement is prepared for the brick surface and then you have the finest road in the world.

Brick is undisputed as the pavement with the lowest maintenance. For length of service, no other pavement comes near it. A vitrified brick surface resists damage from weather as well as traffic. It preserves the base and allows it to perform its structural function.

The National Paving Brick Association will gladly furnish data and descriptive information on resurfacing to those desiring it. The address is 1245 National Press Building, Washington, D. C.



## Financial Position of Corporations

A compilation by Ernst & Ernst of balance sheet figures and other financial data covering 468 industrial corporations whose figures are available for the periods 1929-1931 and 1920-1921 shows the following:

Ratio of current assets less inventories to current liabilities at the close of 1931.....	3.82 to 1
Ratio of current assets less inventories to current liabilities at the close of 1921.....	1.87 to 1

This improvement in liquidity has taken place even though dividend payments by corporations generally were relatively larger throughout 1931 than in 1921. According to statistics published by the Department of Commerce, average monthly dividend payments (exclusive of railways) for 1931 were \$226,000,000, or an increase of 9.09 per cent over the \$207,175,000 monthly average for 1929, whereas for the year 1921 the monthly average was \$45,200,000, or a decrease of 9.85 per cent from a corresponding figure of \$50,140,000 for 1920.

Dollar value of inventories for the

468 industrials at the close of 1931 had declined 25.47 per cent from the close of 1929, and for the same companies at the close of 1921 inventories had declined 26.29 per cent from the close of 1920. While these declines seem very uniform in degree, one outstanding difference in the trend of inventories in these periods is suggested by reference to commodity stocks index figures published by the Department of Commerce. These indexes indicate that in 1921 stocks of both raw and manufactured goods increased as compared with the close of 1920, whereas at the close of 1931 raw material stocks had increased but supplies of manufactured goods had declined as compared with 1929.

Comparisons of the principal current items on corporation balance sheets for 468 industrials classified as to 20 business lines indicate a favorable trend in the declining proportion of net working

	1921	1931	Increase
Current Assets .....	\$6,684,728,185	\$7,794,649,594	\$1,109,921,409
Current Liabilities .....	1,814,873,903	1,141,318,445	*673,555,458
Inventories .....	3,291,536,799	3,433,641,468	142,104,669
Cash and Securities.....	1,521,976,419	2,622,111,114	1,100,134,695

\*Decrease.

capital represented by inventories, which stands at 52 per cent at the close of 1931 compared with 68 per cent at the close of 1921. The decline in cash and securities in 1931 from 1929 of 6.94 per cent, compared with an increase of 1.01 per cent in 1921 from 1920 figures can be partially explained by heavier liquidation of current liabilities in the years 1930-1931 in which period current liabilities were reduced by approximately 40 per cent, whereas in the year 1921 the reduction was approximately 35 per cent.

A separate tabulation of 1100 industrials comparing 1931 with 1929 as to the same items shows very minor changes in the percentages resulting from the compilation for 468 companies and no changes in trends appear, thus indicating that studies based on these 468 leading companies are fairly representative in their results.

For the 468 companies the accompanying summary gives the actual figures for the major items of current assets and current liabilities at the end of 1921 and at the end of 1931.

PIPING REQUIREMENTS  
*for*  
ALL PRESSURES AND SERVICES

PITTSBURGH PIPING  
AND EQUIPMENT CO.  
PITTSBURGH · PENNSYLVANIA

OFFICES IN  
PRINCIPAL CITIES.  
*Established 1903*



### ONE CLEAR FACT

... Out of a tangle of claims about gasoline ... one clear fact stands out ...

### THAT GOOD GULF GASOLINE

is bought more places by more people in Gulf's 27 states because car owners buy on performance ... the only fact that counts.

**GULF REFINING CO.**



## Water Purification Equipment

Water Softeners and Filters—Of Every Type and Size  
Taste—Odor—Chlorine—Color—Iron Removal Plants  
Wet and Dry Chemical Feeders—Proportioning Devices  
Rate of Flow Controllers—Gauges—Venturi Meters

INTERNATIONAL FILTER CO. 59 EAST VAN BUREN STREET  
CHICAGO

## WATER FILTERS

Pressure and Gravity type for Municipal Water Supplies,  
Rayon Manufacturing Plants, Textile Finishing Estab-  
lishments, Raw Water Ice Plants, Laundries, Etc.

ROBERTS FILTER MANUFACTURING COMPANY  
604 Columbia Avenue Darby, Pennsylvania

## WATER PURIFICATION FILTERS and SOFTENERS

for Industrial Plants, Railroads  
Swimming Pools and Municipalities

AMERICAN WATER SOFTENER CO., INC.  
S. E. Cor. 4th & Lehigh Ave. Philadelphia

## Water Purification Plants

Any Type—Any Purpose—Any Capacity

Dry Chemical Feed Machines  
Swimming Pool Filters

E. W. BACHARACH & CO.  
Rialto Bldg. Kansas City, Mo.

"Making Shapes from Boiler Plate Since Eighteen Hundred  
Eighty-Eight"

## J. J. FINNIGAN COMPANY, INC.

Boiler Makers, Tanks and Water Heaters  
Sheet Iron Works

Special Attention Given to all Kinds of Repair  
Work Including Acetylene and Electric Welding

455 Means Street, N. W. ATLANTA, GA.

BRICK—CHIMNEYS—CONCRETE  
BOILER BRICKWORK

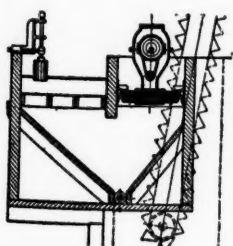
## The Rust Engineering Co.

Engineers and Contractors

BIRMINGHAM, ALABAMA

PITTSBURGH—WASHINGTON—NEW YORK—CHICAGO

## Coal Producers Make Money With ELMORE COAL JIGS



*These Jigs clean your fine coal.  
Merchantable coal insures  
steady customers and  
assures profits.*

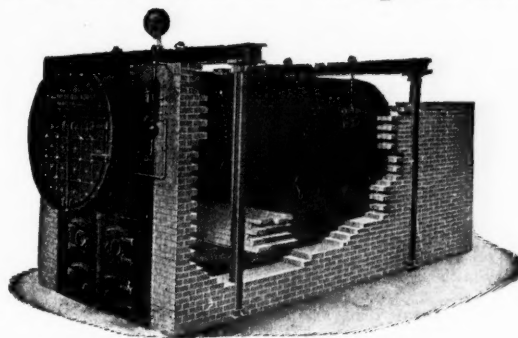
This is a single compartment jig  
for both Anthracite and Bituminous  
coal. A dewatering bucket elevator,  
is provided for removing the refuse  
from the jig tank. A screw con-  
veyor removes the fines from the  
hutch of the jig to the boot of the  
elevator.

Write us for information and prices

Send for circulars of  
Elmore 500-A, 500-B,  
600-A, 600-B.

Chas. C. Steward Machine Co.  
P. O. Drawer 1191, Birmingham, Ala.

## BOILERS for immediate shipment



**W**E carry in stock for immediate shipment  
sizes from 12 to 150 h.p. Working pressure  
of either 100-124 or 150 pounds.

Schofield Boilers are Built of Open Hearth  
Homogeneous Flange and Fire Box Steel  
Plate with a tensile strength of 55,000 lbs. of  
pressure per square inch of section.

All boilers tested to pressure of 50% in  
excess of requirement.

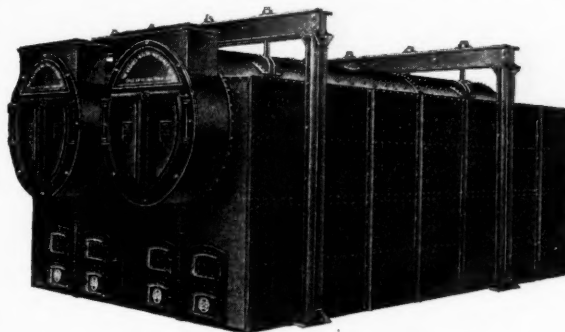
*We also manufacture*

PUMPS, ACID TANKS, DREDGE PIPE, INCINERATORS, ROTARY  
DRYERS, STEEL BUILDINGS, STEEL PLATE WORK, MUNICIPAL  
CASTINGS, GREY IRON CASTINGS, ENGINES, STEEL STORAGE  
TANKS, SEED AND GRAIN TANKS, ELEVATED WATER TANKS



J. S. Schofield's Sons  
Co., Inc.

Macon, Georgia, U. S. A.



## BOILERS

(Return Tubular)

STEEL CASINGS  
STACKS BREECHINGS

## TANKS

for every purpose

FABRICATED STEEL PLATES

Up to 3" Thick

Write For Prices

THE HEDGES WALSH WEIDNER CO.

Main Office and Works

CHATTANOOGA, TENNESSEE

Eastern Office: 200 Madison Ave., New York, N. Y.

Subsidiary International Combustion Engineering Corporation



# FINANCIAL NEWS

## Bond Issues Proposed

Ala., Mobile—Mobile County, E. C. Doody, Clk., Bd. of Revenue and Road Comms., did not sell \$240,000, 4½% paving bonds. 3-24

Fla., Coral Gables—City, Vincent D. Wyman, Mayor, voted to issue \$4,000,000 refunding bonds and \$9,246,000 corporate stock. 4-7

Ga., Jasper—City recently voted \$24,000 waterworks bonds.

Ky., Frankfort—State Budget Comsn., J. Dan Talbott, State Aud., considering plans to carry out provisions of bill passed by General Assembly enabling state to retire floating debt of approx. \$14,000,000 by issuing bonds.

Ky., Paducah—City, Geo. M. Oehlschlaeger, City Aud., will offer \$330,000, 6%, \$1000 denom. funding bonds, through H. M. Byllesby & Co., 231 S. LaSalle St., Chicago, Ill.; accrued interest to be paid by purchaser. 4-14

La., New Orleans—Orleans Levee Bd., A. L. Shushan, Pres., authorized by State Bd. of Liquidation, Baton Rouge, to issue \$4,200,000, not to exceed 6% short-term certificates to meet current obligations in connection with work already done on Pontchartrain lake-front, including Shushan Airport project.

La., West Monroe—City, L. L. Wood, Clk., plans offering \$75,000, 6%, \$500 denom. water works bonds.

Md., Frostburg—City, Roland Lammert, Clk., plans offering \$25,000 4½%, \$1000 denom. water bonds of 1931. 2-25

Mo., Thomasville—City voted \$17,000 school bonds.

Miss., Jackson—Senate passed finance committee bill authorizing \$1,500,000, 6% bond issue for completion of state insane hospital plant.

Mo., Thayer—City voted school building bonds.

N. C., Winston-Salem—Bd. of Aldermen passed ordinance authorizing issuance of \$900,000 refunding bonds; F. J. Peterson, Jr., Commr. of Public Accounts and Finance.

Okl., Muskogee—Muskogee County Comms., W. H. Robins, Chmn., open bids May 4 for \$250,000, not to exceed 5% road bonds; will not be sold for less than par and accrued interest.

Tex., Childress—City plans offering for sale \$156,630, 5% refunding warrants.

Tex., Edna—Jackson County Comms. Court ordered election for May 7 on \$90,000 road bonds.

## Bond Issues Sold

Tenn., Nashville—State Funding Bd., Idalee Richardson, Asst. Sec., advises sold \$17,000,000, 6% bonds for par and accrued interest; \$9,000,000, road bonds to syndicate composed of Chase Harris Forbes Corp., National City Co., Chemical Bank & Trust Co., Lehman Bros., Kean, Taylor & Co., Phelps, Fenn & Co., R. W. Pressprich & Co., R. H. Moulton & Co., Hannahs, Ballin & Lee, Wallace, Sanderson & Co., William R. Compton Co., Inc., Foster & Co., Inc., G. M. P. Murphy & Co., all New York; American National Co., Third National Co., Equitable Securities Corp., Robinson, Webster & Gibson, J. W. Jakes & Co., Cumberland Securities Corp., Commerce-Union Co., Nashville Securities Co., Craig, Parkes & Co., all Nashville; First Securities Corp. and Union & Planters Co., both Memphis, Tenn.; Nolan & Co., Washington, D.C.; \$5,000,000 general fund obligation bonds and \$3,000,000 new bonds called State of Tennessee bonds to syndicate composed of Chase Harris Forbes Corp., National City Co., Chemical Bank & Trust Co., all New York; Hamilton National Bank, East Tennessee National Bank, both Knoxville; First National Bank, Hamilton National Bank and American Trust & Banking Co., all Chattanooga; Bank of Commerce & Trust Co., First National Bank and Union Planters National Bank & Trust Co., all Memphis; American National Bank, Third National Bank, Commerce-Union Bank, Broadway National Bank, National Life & Accident Insurance Co., all Nashville. 3-31

## Building & Loan Associations

Ky., Lexington—Commonwealth Building & Loan Association, capital \$300,000, chartered; R. M. Stark, Morris L. Levy.

## New Financial Corporations

Ark., Siloam Springs—J. E. Bratt, Marion Wasson and associates plan state bank.

La., Shreveport—U. S. Industrial Finance Corp., chartered; John T. Guyton, Pres.; Zula P. Speriky, Sec.-Treas.

Mo., St. Louis—B. & I. Investment Co., chartered; Charles R. Judge, 208 N. Broadway.

N. C., High Point—George H. Salmon, Pres., Pomeroy & Salmon, 17 E. 42nd St., New York, interested in organizing new national bank to take over liquidation of closed Commercial National Bank.

Tex., Fredericksburg—National Bank of Fredericksburg formed with Joe Stein, Pres.; W. J. Schroeder, V.-Pres.

Bank of Hickory Grove, J. S. Wilkerson, Pres., Hickory Grove, S. C., plans reopening.

Benton Trust Co., A. B. Banks, Pres., Benton, Ark., plans reopening.

Buckhannon Bank, Buckhannon, W. Va., to reopen; F. J. Farnsworth, Cashier.

Chatham Bank, J. J. Jenkins, Siler City, N. C., plans reopening.

Col. John F. Bruton and W. E. and Ed Warren, formerly officials of closed First National and Wilson Savings and Trust Banks, both Wilson, N. C., submitted plans to Treasury Dept., Washington, for reopening.

Detour Bank, C. R. Fogle, Pres., Detour, Md., reopening.

Directors of South Carolina State Bank, Wesley Key, V.-Pres. and Cashier, Greenville, S. C., voted to merge with local unit of South Carolina National Bank, Julian Mitchell, Pres., Charleston, as of May 1.

Farmers' & Merchants' Bank, W. H. Ogden, Pres., Slaughters, Ky., plans reopening.

First National Bank, Jay M. Riley, receiver, Lake Village, Ark., plans reorganizing.

First National Bank, W. W. Lasley, Pres., Burlington, N. C., plans reopening.

First National Bank, W. E. White, Pres., Louisville, N. C., plans reopening.

First National Bank, Henry Perry, Pres., Henderson, N. C., plans reopening.

G. M. P. Murphy & Co., 52 Broadway, New York, and Baltimore, and J. S. Wilson, Jr., & Co., Calvert Bldg., Baltimore, merged; J. Sawyer Wilson, Jr., and Charles H. Baetjer, partners in Wilson firm, will, upon dissolution of their firm, become general partners of Murphy & Co., and Baltimore office of latter firm will move to present office of Wilson firm.

People's Bank, J. P. Woods, Chmn. of Bd., Vinton, Va., and Mountain Trust Bank, L. B. Davis, Pres., Roanoke, Va., merged.

## Financial Notes

### Alabama Power Company

Net income of the Alabama Power Company, Birmingham, and subsidiaries, controlled by Commonwealth & Southern Corporation, New York, amounted to \$4,496,939, according to a pamphlet report of the company for the year ended December 31, 1931. This was after taxes, interest, amortization, depreciation, etc., and compares with net of \$5,305,253 for the year ended December 31, 1930. Gross earnings of the company for 1931 amounted to \$17,758,443, as compared with \$17,910,572 for 1930; expenses and taxes, \$7,743,563, compared with \$7,654,694, and balance, \$10,014,880 compared with \$10,255,878. Net income for 1931 was equivalent to \$12.27 a share on 366,561 shares of combined \$7, \$6 and \$5 preferred stocks, and compares with \$16.25 a share on 326,356 combined shares of preferred stocks in 1930.

## Tennessee Corporation Report

For the year ended December 31, 1931, net profit of the Tennessee Corporation and subsidiaries amounted to \$5365, compared with a net profit in 1930 of \$1,034,907, according to the annual report of the corporation. Sales for 1931 amounted to \$7,572,760, as compared with \$12,106,518 for 1930, and costs to \$7,231,051, compared with \$10,246,843 for 1930. The company bought \$100,000 of Series B bonds for the sinking fund, reducing outstanding bonded indebtedness December 31, 1931, to \$3,107,900. Depreciation write-off was less in 1931 than in previous years because, with the output smaller, machinery depreciation was less.

## Standard Gas and Electric

For 12 months ended January 31, 1932, gross earnings of the Standard Gas and Electric Company, Chicago, and affiliated companies, amounted to \$144,023,060, as compared with \$153,257,280 for the similar period last year, and net earnings to \$71,364,764, as compared with \$73,534,397. The Louisville Gas and Electric Company, Louisville, Ky., an affiliate, had gross earnings for the year of \$10,507,420, as compared with \$10,625,758 for the similar period last year, and net earnings of \$5,743,850, as compared with \$5,513,923. The Oklahoma Gas and Electric Company, also an affiliate, had gross earnings of \$11,837,642, compared with \$14,001,685 for the similar period last year, and net earnings of \$6,017,730, compared with \$6,542,318.

## \$4,200,000 Short Term Certificates

New Orleans, La.—At the request of A. L. Shushan, president of the Orleans Levee Board, the State Board of Liquidation, Baton Rouge, authorized the Levee Board to issue \$4,200,000 short term certificates at an interest rate not to exceed 6 per cent and for a period not to exceed 5 years. These certificates would be redeemed by a previously authorized issue of bonds when sold.

# FLORIDA

for

## FARMING

Diversified farming pays well in Florida where the farmer has the advantage of two and three crops a year from the same land.

Plan to personally investigate the advantages of farming in Florida.

For literature write

**MODEL LAND COMPANY**  
FLAGLER SYSTEM  
ST. AUGUSTINE, FLORIDA

## The South's Business

Our experience and success warrant our wanting to identify this bank further with the business and progress of the South.

Inquiries about our service will be treated as coming from friends.

### BALTIMORE COMMERCIAL BANK

GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000.00

Member Federal Reserve System

Delaware Corporations  
Forms, Law and Pointers

Estimates of Cost Furnished Without Cost

### DELAWARE REGISTRATION TRUST CO.

900 Market Street  
Wilmington, Delaware.

J. Ernest Smith, President and General Counsel.  
Chas. Warner Smith, Vice-President.  
Harry W. Davis, Secretary and Treasurer.

## SOUTHERN TEXTILE SECURITIES

A. M. LAW & COMPANY

Established 1892

Spartanburg, S. C.



SCHOOL DESKS

*The H. H. Andrews Co.*  
CHICAGO

107 So. Wabash Avenue

IF YOU WANT TO GET  
*Southern Business*  
*Advertise in the*  
MANUFACTURERS RECORD

### SOLAR SELF-CLOSING WASTE RECEPTACLES

- 1 Reduce Cleaning Costs.
- 2 Eliminate Fire Hazards.
- 3 Promote Sanitation.
- 4 Reduce Plumbing Expenses.
- 5 Harmonize with Finest Surroundings.
- 6 Will Last Many Years—no upkeep.



Solars are the modern way of collecting waste in a clean, silent, efficient, and unobjectionable manner. Dignified and beautiful in appearance. Made in nine sizes, and four color finishes.

THE WHITAKER PAPER COMPANY

Saratoga St. and Guilford Ave

Baltimore, Maryland

## Electric Bond and Share Company

Two Rector Street, New York

### THE OSCAR T. SMITH & SON CO.

Manufacturing

BANK AND COMMERCIAL STATIONERS

407-9-11 E. Saratoga Street

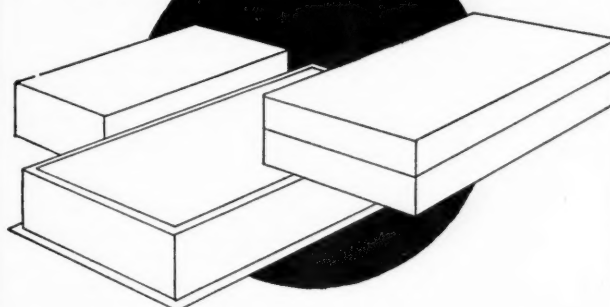
BALTIMORE, MD.

CHARACTER

QUALITY

— SERVICE —

## Better Packing FOR TEXTILES



Pack your textile product in paper boxes with personality . . . styled to fit today's markets . . . printed to give your trade mark added effectiveness—in any desired combination of colors. Five strategically located Southern plants to give you quick service and low freight rates. Write today to our nearest plant for samples and prices.

OLD DOMINION BOX COMPANY, INC.  
Lynchburg, Va.

Winston-Salem, N. C. Burlington, N. C. Ashboro, N. C. Charlotte, N. C.

*quality* OLD DOMINION  
**Paper Boxes**



### \$13,000,000 Refinancing Plan

Coral Gables, Fla.—Proposals to issue refunding bonds and corporate stock to take up outstanding obligations of the city have been approved by Coral Gables voters. Plans call for the issuance of \$4,000,000 40-year bonds at 6 per cent and the issuance of corporate stock for the city's remaining outstanding obligations amounting to \$9,246,000.

According to Mayor Vincent D. Wyman, the Bondholders' Protective Committee, Edwin H. Barker, chairman, New York City, with which the city has negotiated these arrangements, now represents more than 75 per cent of the outstanding bonds. The settlement proposal will not be declared effective, however, until substantially all the remainder of the bonds have been deposited. Bonds to be issued under the Settlement Plan will not be placed on the market but

bonds and corporate stock will be exchanged at par for the outstanding indebtedness.

### Annual Road Builders' Meeting

The American Road Builders' Association will hold its annual meeting at its offices in the National Press Building, Washington, on April 28 and 29, at which time W. R. Smith will retire as president and Thomas H. Cutler, chief engineer of the Missouri State Highway Commission, will succeed him. Other newly elected officers and directors of the Association and Divisions will be installed at the same time. For the purpose of discussing plans for the coming year, boards of directors of the Association, Manufacturers' Division, County Division and City Division, as well as special committees, will also meet.

### Motor Truck-Rail Service

New Orleans, La.—Motor truck service to be used in connection with rail service of the Southern Pacific Lines will be operated by the Southern Pacific Transport Company of Louisiana, Inc., according to Joseph Lallande, general freight agent of the latter. The service has been authorized by the Louisiana Public Service Commission. Less than carload shipments within Louisiana territory serviced by the Southern Pacific System will be handled. Later it is planned to extend the service in Louisiana territory served by connecting rail lines.

St. Louis reports the establishment during March of ten new industries and the expansion of five existing plants.



# PROPOSALS

BOND ISSUES BUILDINGS PAVING GOOD ROADS



Bids close May 3, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 6, 1932.—SEALED BIDS in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 3, 1932, for furnishing all labor and materials and performing all work for the foundations, etc., of the U. S. post office, etc., at Auburn, Ala. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding one set, may be obtained by any satisfactory general contractor at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close May 10, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 12, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 10, 1932, for furnishing all labor and materials and performing all work for replacing present galvanized fittings on old hot water piping with new brass fittings at the U. S. post office and court house, Richmond, Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 29, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., March 30, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 29, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Bucyrus, Ohio. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding 3 sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

### GENERAL INFORMATION

#### About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday  
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M., Tuesday, forward by night letter or air mail when possible.

#### THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close May 23, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 9, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 23, 1932, for furnishing all labor and materials and performing all work for construction (except elevators and dumbwaiters) of the U. S. post office, etc., at Paterson, N. J. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close May 5, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 14, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 5, 1932, for furnishing all labor and materials and performing all work for new furnaces, etc., in the U. S. assay office, New York, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 27, 1932.

SEALED BIDS, indorsed "Bids for Obstacle Lighting, Specification No. 6822" will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 o'clock A. M., April 27, 1932, and then and there publicly opened for wire, cable, conduit, switch, lamps, junction boxes, pole steps, and equipment for a complete system of lighting two radio masts at the Radio Station, Galveston, Texas. Specification No. 6822 and accompanying drawings may be obtained on application to the Bureau or to the Commandant, Eighth Naval District, New Orleans, La. Deposit of a check or postal money order for \$10, payable to the Chief of the Bureau of Yards and Docks, is required as security for the safe return of the drawings and specifications. A. L. PARSONS, Chief of Bureau, March 22, 1932.

Bids close May 9, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 9, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 9, 1932, for furnishing all labor and materials and performing all work for excavation, foundations, etc., for the U. S. post office at Portland, Maine. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

April 21, 1932

## PROPOSALS

49

Bids close May 16, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., April 2, 1932.—**SEALED BIDS** in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 16, 1932, for furnishing all work for the construction (except elevators, book truck lift and electric dumbwaiters) of the U. S. department of labor building and connecting wing, labor-interstate commerce commission buildings at Washington, D. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Not exceeding 6 sets of drawings and specifications will be furnished to the prospective bidders upon application therefore, when such application is accompanied by a deposit of \$100.00 for each set to insure its return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be acceptable. Each bid must be accompanied by a statement of facts in detail of the business and technical organization of the bidder available for the contemplated work, including financial resources and building experience, and no consideration will be given to a bid which is not accompanied by said statement. The right is reserved to reject any bid where an investigation or the evidence submitted by such bidder does not satisfy the contracting officer that such bidder is qualified to carry out properly the terms of the contract. In awarding a contract, consideration will not be given to bidders who have not constructed within the last six years at least one building comparable with the project for which the bid is submitted. The successful bidder will be required to furnish a performance bond of at least 50 per cent of the contract price. JAS. A. WETMORE, Acting Supervising Architect.

Bids close May 17, 1932.

**SEALED BIDS**, in triplicate, subject to the conditions contained herein, will be received by the Veterans' Administration, Room 764, Arlington Building, Washington, D. C., until 2.30 P. M., May 17, 1932, and then publicly opened for furnishing all labor and materials and performing all work required for constructing and finishing complete at VETERANS ADMINISTRATION HOME, WICHITA, KANSAS, BUILDINGS AND UTILITIES. This work will include excavating, roads, walks, grading and drainage, reinforced concrete, hollow tile, brickwork, architectural terra cotta, cut stone, slate stair treads, marble work, terrazzo, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, iron work, steel stairs, steel shelving, cabinets and partitions, slate, shingle tile, metal and built-up roofing, lightning conductors, roof ventilators, metal lathing, plastering, sound deadening, carpentry, metal weatherstrips, insect screens, platform scales, dumbwaiter, painting, glazing, hardware, plumbing, refrigerating and ice making plant, zeolite water softening system, heating and ventilating, electrical work, electric elevators, and outside distribution systems, and such other items as shown or specified. **SEPARATE BIDS** will be received for (a) General Construction including Radial Brick Chimney; (b) Plumbing, Heating, Electrical Work; (c) Electric Elevators; (d) Refrigerating and Ice Making Plant; and (e) Zeolite Water Softening System; all as set forth on bid form. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. **GEORGE E. JAMES**, Assistant Administrator. April 7, 1932.

Bids close May 23, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., April 11, 1932.—**SEALED BIDS** in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 23, 1932, for furnishing all labor and materials and performing all work for the construction (except elevators, truck lift, dumbwaiter and P. O. station loading platform door, of the U. S. post office department building at Washington, D. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Not exceeding 6 sets of drawings and specifications will be furnished to the prospective bidders upon application therefore, when such application is accompanied by a deposit of \$100.00 for each set to insure its return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be acceptable. Each bid must be accompanied by a statement of facts in detail of the business and technical organization of the bidder available for the contemplated work, including financial resources and building experience, and no consideration will be given to a bid which is not accompanied by said statement. The right is reserved to reject any bid where an investigation or the evidence submitted by such bidder does not satisfy the contracting officer that such bidder is qualified to carry out properly the terms of the contract. In awarding a contract, consideration will not be given to bidders who have not constructed within the last six years at least one building comparable with the project for which the bid is submitted. The successful bidder will be required to furnish a performance bond of at least 50 per cent of the contract price. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 26, 1932.

## Bridges

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

## NOTICE TO CONTRACTORS

Baltimore, Md.

**SEALED PROPOSALS** for the construction of bridges as follows:  
Cecil County, Contract No. Ce-83-1-22—Structural steel superstructure (single 94 foot 6 inch span pony truss) for bridge over Little Elk Creek on the road from Elkton to Childs  
Washington County, Contract No. W-109-611—Sidewalk extension for existing arch bridge over Great Tonoiloway Creek at West end of Hancock  
will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 26th day of April, 1932, at which time and place they will be publicly opened and read. **PREQUALIFICATION OF BIDDERS REQUIRED.**

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00 for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 12th day of April, 1932.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close May 3, 1932.

## Oil Engine Repairs

Leland, Miss.

The City of Leland, Mississippi, will receive bids on May 3, 1932, at the office of the City Clerk until 7.30 P. M. on

Reboring four cylinders on 16 by 20 Fairbanks Morse Diesel Oil Engine, furnishing pistons for same weighed and balanced, furnishing four new fuel injection pumps, four new cam rollers, new valves and springs for scavenger pump.

Bond for five thousand dollars for proper erection and test for six months will be required.

MARY P. JOHNSON, City Clerk.

Bids close April 26, 1932.

## Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

## NOTICE TO CONTRACTORS

Baltimore, Md.

**SEALED PROPOSALS** for building five sections of State Highway as follows:

Caroline County, Contract No. Co-75-22—Federal Aid Project No. 255-A—One section of State Highway along the Ridgely-Greensboro Road from the end of Contract No. Co-66 near Boonsboro toward Greensboro for a distance of 1.60 miles (Concrete)

Montgomery County, Contract No. M-213-311—Federal Aid Project No. 129—Revised—One section of State Highway from White Oak to Ashton for a distance of 5.38 miles (Concrete Shoulders and Concrete Roadway)

Frederick County, Contract No. F-188-52—One section of State Highway along the Licksville-Point of Rocks Road from the end of Contract No. F-137 to Point of Rocks for a distance of 2.18 miles (Concrete)

Garrett County, Contract No. G-66-64—One section of State Highway along the Finzel Road from the National Pike to the Pennsylvania State Line for a distance of 3.28 miles (Concrete)

Talbot County, Contract No. T-46-22—One section of State Highway along the Tilghman Island Road from the end of Contract No. T-32 south of Wittman to Tilghman Island for a distance of 4.71 miles (Macadam Resurfacing)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 26th day of April, 1932, at which time and place they will be publicly opened and read. **PREQUALIFICATION OF BIDDERS REQUIRED.**

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00 for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

BY ORDER of the State Roads Commission this 12th day of April, 1932.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close May 3, 1932.

## Highway Signs

Richmond, Va.

Sealed bids will be received at the office of the Va. Dep't. of Highways, Richmond, Va., 10 A. M. Tuesday, May 3rd, 1932, for Furnishing 1105 WHITE CRYSTAL BUT-TON TYPE REFLECTOR HIGHWAY SIGNS. Bids must be submitted on proposal furnished by State. Details will be furnished upon request.

Bids close May 4, 1932.

## Shed and Warehouse

Richmond, Va.

**SEALED PROPOSALS WILL BE RECEIVED AT THE OFFICE OF THE DIRECTOR OF PUBLIC WORKS, RICHMOND, VA., UNTIL 3 O'CLOCK P. M. MAY 4, 1932, for the Construction of a Two-Story Transit Shed and Warehouse (steel frame and sides), approximately 77 ft. x 223 ft., along the Municipal Wharf between Gillies Creek and foot of Nicholson Street.**

Form of Proposal, Plans and Specifications can be obtained on application.

A charge of \$10.00 will be made for these plans, etc., which sum will not be refunded.

A CERTIFIED CHECK for the amount stated (\$5000.00) on proposals must accompany each bid as a guaranty of execution of contract. The Director of Public Works reserves the right to reject any or all bids.

R. KEITH COMPTON,  
Director Public Works.



Bids close May 11, 1932.

Arlington Memorial Bridge Commission, Office of the Executive Officer, Washington, D. C.—Sealed bids, in duplicate, will be received in this office until 11.00 A. M., Eastern Standard Time, May 11, 1932, and then publicly opened in Room 1615, Navy Building, for furnishing all labor and materials and performing all work in connection with the construction of the Memorial Entrance to the Arlington National Cemetery at the west end of the Arlington Memorial Bridge project. The approximate quantities of the major items of work are in part as follows: Reinforced concrete, 4,080 cubic yards; reinforcing steel, 465,000 pounds; granite setting, 56,530 cubic feet; grading, 25,600 cubic yards; waterproofing, 28,340 square feet; also drainage system consisting of catch basins, manholes, and miscellaneous cast iron and vitrified pipe. Further information upon application to Room 1031, Navy Building.

Bids close May 3, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 11, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., May 3, 1932, for furnishing all labor and materials and performing all work for the foundations of the U. S. court house at Jacksonville, Fla. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 26, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 5, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 26, 1932, for furnishing all labor and materials and performing all work for excavation and foundation, etc., of the U. S. post office, etc., at Princeton, W. Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

## CLASSIFIED OPPORTUNITIES

### MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

#### CLAYS

SALE OR ROYALTY—Inexhaustible supply light weight floating clays; also clays suitable for insulation, roofing, drain, building tiles, suitable glazes. Address No. 9184, care of Manufacturers Record.

#### TIMBER OPERATION

FOR SALE, LUMBER OPERATION.—Over thirteen hundred acres timber land, virgin forest,—poplar, oak, white pine, etc., also band mill, railroad and equipment, near Parsons, West Va. Property of the late Scheller Brothers. Want to sell as going concern. W. K. Pritt and J. W. Harman, Special Receivers, Parsons, West Va.

#### FARM, FRUIT AND TRUCK LANDS

FLORIDA HOMES AND INVESTMENTS  
We offer complete real estate and investment service. References. J. HARDEE BRINSON, Box 743, Miami, Fla.

A Very Unusual Offer Of  
ONE HUNDRED THOUSAND ACRES  
South Florida Acreage  
Diversified soils, suitable for citrus fruits, truck gardening, winter homes and estates, tung oil, timber growing, cattle raising and other purposes. Can be selected from larger holdings under one ownership, to meet requirements for investment or development.  
For information as to special cash price, and management or engineering service, write:

THE JAMES D. LACEY COMPANY,  
350 Madison Ave., Barnet Bank Bldg.,  
New York City. Jacksonville, Fla.

#### MANUFACTURING AND MARKETING

IF YOU HAVE SOMETHING with merit to be made of iron, can manufacture and market same for you. Write P. O. Box 253, Sheffield, Alabama.

#### BUSINESS OPPORTUNITIES

WE WILL SAVE YOU 40% on construction of your ice and cold storage plant. Many plants designed by us are producing ice under \$2.00 per ton and our cold storage plants eliminate Sunday and night running of compressors. Inquiries solicited. Mayer Construction Co., 3850 Lansdowne Ave., Cincinnati, Ohio.

A PERMANENTLY profitable working-partner-ownership is open to a contractor with ten thousand cash and available equipment of hoists, compressors, auto and trucks. For gold quartz shipping and milling operation near Lordsburg, New Mexico. Wire reply for early personal contact with owner. BUTLER & SON, Engineers, 2573 Amboy Rd., New Dorp, N. Y. City.

### Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to line. When the advertisement contains a number of long words proper allowance should be made.

#### Rates for Special Contract:

100 lines 28c a line  
300 lines 26c a line  
500 lines or more 25c a line.

TERMS: For transient advertising cash with order; check, post office or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

### QUANTITY SURVEYS

ACCURATE and dependable quantities for Government Projects furnished at a reasonable charge to General Contractors, Sub-Contractors, Agents and Manufacturers. Inquiries solicited.

JOE B. MARTIN,  
907 15th St., N. W., Washington, D. C.

### FACTORY SITES

JACKSONVILLE, FLA., WANTS YOU. Whole block industrial site 172x320, near center city. All improvements, railroad spur, steamships to many foreign ports, a very low electrical rate, taxes cut to the bone. Address  
BOX 504, JACKSONVILLE, FLA.

### WAREHOUSE SPACE

WAREHOUSE SPACE for rent at low figure directly in proportion to the amount of space used. Side track available.

HORACE K. HOUSTON,  
Box 2701, Memphis, Tenn.

WAREHOUSE SPACE with trackage facilities available for lease at low rental. Brick building, concrete floors, low insurance rate. Steam and refrigeration available. TRIPLE "XXX" CO., Galveston, Tex.

### PATENT ATTORNEYS

FREE "PATENT PARTICULARS"  
Sterling Buck, over 25 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

### PATENT ATTORNEYS

E. H. PURDY  
Registered Patent Attorney  
Reasonable Charges  
1004 Lexington Bldg., Baltimore, Md.

PAUL B. EATON, Patent Attorney  
1408-R Johnston Bldg., Charlotte, N. C.  
941 Munsey Building, Washington, D. C.  
417 Wachovia Bldg., Winston-Salem, N. C.

PATENTS—Booklet free. Highest references. Best results. Promptness assured.  
WATSON E. COLEMAN, Patent Lawyer,  
724 Ninth St., N. W., Washington, D. C.

SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 892, National Press Building, Washington, D. C.

### AGENCIES WANTED

A MANUFACTURER with established Eastern and Southern connections among Industrial Plants would like to handle another line in conjunction with our own. No. 9186, care Manufacturers Record.

WASHINGTON SALESMAN, well acquainted with officials in various Government departments, will take on additional building specialty other than machinery, steel and iron or similar products. Address No. 9187, care Manufacturers Record.

### MEN WANTED

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty-two years. Send only name and address for details.

R. W. BIXBY, INC.,  
103 Downtown Bldg. Buffalo, New York

### FOUNDRIES

STEEL CASTINGS  
Rough or Machined.  
W. W. PETTIS COMPANY,  
Cincinnati, Ohio.

### MACHINERY AND SUPPLIES WANTED

WANTED—Second Hand Corrugated Culvert Roll, Combined Punch and Stake B. veter, and Shear with Corrugated Blades, to be used for making corrugated culvert pipe. North Carolina Equip. Co., Raleigh, N. C.

# RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES

## NEW AND USED PIPE

NEW THREADS AND COUPLINGS  
**GREENPOINT IRON & PIPE CO. Inc.**  
187-207 Maspeth Ave., Brooklyn, N. Y.

## PIPE TUBES - TUBING

For All Purposes

**McDOWELL PIPE CORP.**  
309 SCHOLLES ST., BROOKLYN, N. Y.

## 8-in. Galvanized Corrugated Pipe

6,000 ft. 8-in. New Galvanized Corrugated Pipe in lengths 16 to 20 ft., suitable for exhaust drains, water systems, sewers, etc. Have the necessary connecting sleeves. Priced considerably under the market.  
300,000 ft. Reconditioned Pipe, new threads and couplings, all sizes from 1/4 in. to 24 in., guaranteed suitable for all practical purposes.

**Marine Metal & Supply Co.**  
167 South Street New York City

**NEW-USED  
RECLAIMED  
FROM 1876-77**  
Cut to Sketch and Stocked  
**ALBERT PIPE SUPPLY CO. Inc.**  
Brooklyn, New York

**PIPE**  
NEW—SECOND HAND  
Established 1904  
**ALBERT & DAVIDSON  
PIPE CORP.**  
2nd Ave., 50th-51st Sts., Brooklyn, N. Y.

## TRANSFORMERS— SALES AND REPAIR SERVICE

Quick Delivery and Low Prices

A complete stock of transformers 1 to 1000 kva. Modern methods make our repair service second to none. Special service on breakdown jobs.

All transformers guaranteed for one year  
Write for Catalog No. 126-E.

**The Electric Service Company, Inc.**

"America's Used Transformer Clearing House"  
Mariemont Ave. and Trade St., Mariemont, Cincinnati, O.

## IRON AND STEEL PIPE

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

**CENTRAL PIPE & SUPPLY CO.**  
Box 1099 Charleston, W. Va.

## EXCELLENT MACHINES

2 1/2" to 8" Williams pipe machine single pulley drive, taper attachment.  
1/2" to 2" Williams Rapiduction pipe machine, single pulley drive with bolt dies.  
14" Espen Lucas column facer, motor drive.  
6" x 6" and 8" x 8" high speed hack saws.

**THE O'BRIEN MACHINERY CO.**  
113 N. Third St., Philadelphia, Pa.

## Construction Equipment FOR SALE

- 1—Model 70 Steel Wiley Whirley, serial No. 3085, mounted on eight wheels. Portable Gantry Tower 30 ft. high, track 18 ft. gage, 14 ft. diameter turn table, rotating frame 14 x 24'-6", equipped with 3 drum National hoisting engine power with 100 HP Westinghouse slip ring motor, and Lidgerwood Independent Swinging Engine with 25 HP motor. Whirley without engines weighs approximately 68 tons.
- 1—9 B 2 McKiernan-Terry Pile Hammer.
- 1—7 McKiernan-Terry Pile Hammer.
- 1—6 x 8 Dayton-Dowd Centrifugal Pump powered with 25 HP motor.
- 1—VS 21 Sullivan Channelling Machine.
- 1—56 S Model R Ransome Concrete Mixer powered with 40 HP General Electric motor.
- 1—118 ton Blaw Knox Steel Bin complete with two Blaw Knox Inundators and one 6,000 lb. Gravel Weighing Batchers with scales.
- 1—Type 35 Massillon Gasoline Caterpillar Combination Gas Shovel and Crane powered with 101 HP Hercules Motor, 1 1/4 yard dipper and 50 ft. lattice steel boom.
- 1—1 1/4 yd. Caterpillar Industrial Works Combination Shovel and Crane powered with 82 HP Buda Engine, 1 1/4 yard Shovel, and 50 ft. lattice boom.
- 1—Erie Steam Driven Caterpillar Combination Shovel and Crane, 3/4 yard Shovel, 40 ft. boom.
- 3—1/4 yard Williams Clamshell Buckets.
- 1—Ingersoll Rand 16 x 10 x 14 Type XB2 Air Compressor, capacity 599 ft. per minute, powered with 104 HP General Electric Motor.
- 1—16" Allis Chalmers Centrifugal Pump, Style S, rated 7500 gallons per minute, 50 ft. head, direct connected to 125 HP Allis Chalmers Motor.
- 1—21 E Koehring Paver mounted on full caterpillar driven charge and skip, automatic measuring water tank, delivery boom and bucket.
- 2—21 S Lakewood Type L Mixers on trucks, elevating power loading type.
- 1—4" Type C Fuller-Klinton Cement Pump powered with 25 HP Westinghouse motor.
- 1—Fuller Klinton two stage Rotary Air Compressor powered with 40 HP Motor complete with automatic lubricator, regulator and air receiver.
- 3—2 cubic yard Steubner Controllable Dump Concrete Buckets.
- 1—60 cubic feet Wiley Concrete Bucket.
- 2—Worthington Type "OS" Centrifugal Pumps, 14" suction, 12" discharge, bronze impellers, flexible couplings and extended bed plates, powered with 75 HP General Electric Motors.
- 1—Nash Hytor Vacuum Pump Size 1/4-0 powered with 3 HP General Electric Motor.
- 1—10 ton Stiff Leg Derrick 16 x 16 x 50' Mast, 16 x 16 x 76' boom, 14 x 14' Stiff legs and 14 x 14' lay legs, and 16 ft. steel bull wheel powered with 3 drum 10 x 12 Lidgerwood Hoisting Engine and 6 x 8 Lambert Swinging Engine.

**GENERAL CONTRACTING CORPORATION**  
Columbia Bank Bldg. Pittsburgh, Pa.

## 36" PORTABLE TRACK

25 lb. rails—7 steel ties per 15 ft. sections. Over ten miles, located Ocala, Fla. Also locomotives, cars, cranes and shovels.

Write us or have your local dealer do so.  
**EQUIPMENT CORPORATION OF AMERICA**  
1166 So. Washtenaw Ave., Chicago

## REBUILT EQUIPMENT

Motors A.C. and D.C. Transformers. Pumps, Air Compressors, Lathes, Wheel lathes, Wheel press, Slotter, Milling machine, Time recording clocks, Watchman's clocks, Pulleys and Hangers.

**Guyan Machine Shops**  
Logan, W. Va.

## FOR SALE

10'x1 1/2"—D & K Bending Brake—M. D.  
18 KVA—G. E. Belted Gentr. 3/60/240.  
2—250 HP Heine Type W. T. Boilers—185 lbs.  
375 KVA—Ridgway Unit 3/60/480 Volts.  
**ARTHUR S. PARTRIDGE**  
ST. LOUIS 415 PINE ST.

## STEEL BUILDINGS

Practically new standard steel buildings at just above scrap price—

1—45 ft. wide by 90 ft. long by 22 ft. high at eaves, 9" I beam columns, with 4" channel rafters.  
Price: \$400.00 f.o.b. cars, Zama, Miss.

1—35 ft. wide by 75 ft. long by 22 ft. high at eaves, 9" I beam columns, and 4" channel iron rafters.  
Price: \$350.00 f.o.b. cars, Zama, Miss.

1—45 ft. wide by 60 ft. long by 16 ft. high at eaves, 8" I beam columns, and 4" channel rafters.  
Price: \$200.00 f.o.b. cars, Zama, Miss.

All bolted buildings—excellent condition, must be moved immediately.  
Also, large steam plant—several Corliss engines and 72 x 18 H.R.T. boilers.

**W. M. Smith & Company**  
P. O. Box 1709, Birmingham, Ala.







## QUINN "HEAVY DUTY" PIPE FORMS

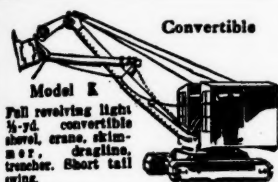
HAND OR  
WET PROCESS

Made of heavy material—reinforced. Two piece jacket—one piece core machined joints. Produces high grade pipe—uniform wall thickness. Backed by 20 years experience in concrete pipe equipment production.

Sizes 12" to 84"—any length.  
Tongue & Groove or Bell  
End Pipe

**QUINN WIRE & IRON WORKS**

1605 12th St., Boone, Iowa

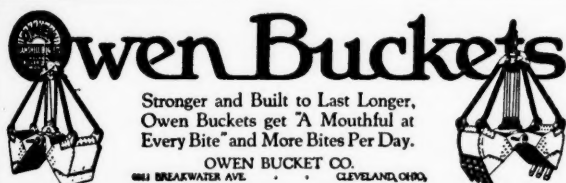


Convertible

## POWER SHOVELS CRANES, DRAGLINES TRENCH HOES

$\frac{3}{8}$  yd. to 1 yd. capacity  
Full or part circle

**BAY CITY SHOVELS, Inc.**  
Bay City, Mich.



Stronger and Built to Last Longer,  
Owen Buckets get 'A Mouthful at  
Every Bite' and More Bites Per Day.

**OWEN BUCKET CO.**  
1111 BREAKWATER AVE. CLEVELAND, OHIO



For FAST, LOW COST DIGGING

... USE a

**CLAMSHELLS**  
All Types - All Sizes

**WILLIAMS  
BUCKET**

**THE WILLMAN ENGINEERING CO.**  
7003 CENTRAL AVE., CLEVELAND, OHIO

## SAND PUMPS

A wide range of types in sizes 4" to 15"

For belt drive and for direct connection to motor  
Illustrated booklet on request

**GEORGIA IRON WORKS**  
AUGUSTA, GA.



Manufacturers of Rails, Frogs, Switches,  
for Permanent and Portable Track. Com-  
plete line of Steel Posts for Fence and  
other purposes.

Catalog will be sent on request

**SWEET'S STEEL COMPANY**  
MANUFACTURERS  
WILLIAMSPORT PENNA.



IT'S PAY DIRT WHEN IT'S  
HANDLED BY A LIMA

Chief among the advantages of LIMA shovels, draglines, cranes and backdiggers is the application of roller bearings at every vital bearing point. This advanced engineering principle, pioneered by LIMA, has established new records of efficiency and continuous operation. Contractors everywhere who know the true value and fine qualities of this type of equipment are standardizing on LIMA. Inspect the LIMA, and you will see at once the many advantages which make it the greatest value ever offered to the user of excavating machinery.

**The Ohio Power Shovel Company**  
Division of Lima Locomotive Works, Incorporated

ATLANTA 303 Mortgage Guar-  
anty Building  
LIMA, OHIO  
MEMPHIS 1963 Union Ave.  
DALLAS 1303 So. Lamar St.

# LIMA



# Classified Index for Buyers

## ABRASIVE MATERIALS.

Carborundum Co., Niagara Falls, N. Y.

## ACCOUNTANTS and AUDITORS

Ernst & Ernst, New York, N. Y.

## AIR COMPRESSORS (Stationary and Portable.)

Armstrong & Bro. Co., R. S., Atlanta, Ga.  
De Laval Steam Turbine Co., Trenton, N. J.  
General Electric Co., Schenectady, N. Y.  
Westinghouse Traction Brake Co., Wilmerding, Pa.

## AIR HEATERS.

Babcock & Wilcox Co., New York.

## APPRAISERS.

Main, Inc., Chas. T., Boston, Mass.

## ARCHITECTS.

Chase, Wm. J. J., Atlanta.  
Main, Inc., Chas. T., Boston, Mass.  
Milburn, Meister & Co., Washington, D. C.  
Moyer Co., Tilghman, Allentown, Pa.  
Freacher & Co., Inc., G. Lloyd, Atlanta.  
Sistine & Co., J. E., Greenville, S. C.

## ARCHITECTS' SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

## ASPHALT.

Gulf Refining Co., Pittsburgh, Pa.

## —Filler.

American Limestone Co., Knoxville, Tenn.

## —Paving.

Barber Asphalt Co., Philadelphia, Pa.

## BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

## BANKS and TRUST COMPANIES.

Baltimore Commercial Bank, Balto., Md.  
Baltimore Trust Co., Baltimore, Md.  
Bank of New York & Trust Co., New York City.  
First and Merchants National Bank, Richmond, Va.

## BARGES (Steel.)

American Bridge Co., Pittsburgh, Pa.  
McClintic-Marshall Corp., Bethlehem, Pa.

## BARS (Steel, Rounds, Flats, Hexagon and Squares.)

Carnegie Steel Co., Pittsburgh, Pa.  
Gulf States Steel Co., Birmingham, Ala.  
Ingalls Iron Works Co., Birmingham.  
Sweet's Steel Corp., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

## BEAMS, CHANNELS, ANGLES.

Carnegie Steel Co., Pittsburgh, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BILLETS (Basic Open Hearth.)

Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

## BITUMINOUS ROAD MATERIAL.

Koppers Products Co., Pittsburgh, Pa.

## BLASTING POWDER and Accessories.

Du Pont de Nemours & Co., E. I., Wilmington, Del.

## BLINDS (Venetian and Awning.)

Wilson Corp., The J. G., New York.

## BLOCKS (Chain.)

Wright Mfg. Co., Bridgeport, Conn.

## BOILER REPAIRS.

Finnigan Co., Inc., J. J., Atlanta, Ga.

## BOILERS (New.)

Babcock & Wilcox Co., The, New York.  
Charleston Dry Dock & Machine Co., Charleston, S. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.

## —(Oil.)

Babcock & Wilcox Co., New York.

## —(Used.)

Delta Equipment Co., Philadelphia, Pa.  
O'Brien Machinery Co., Philadelphia, Pa.

## BOILER SETTINGS.

Babcock & Wilcox Co., New York.  
Brooks-Fisher Co., Atlanta, Ga.

## —Tubes.

Babcock & Wilcox Co., New York.  
National Tube Co., Pittsburgh, Pa.

## —Tubes (Charcoal, Iron.)

Reading Iron Co., Reading, Pa.

## BOLTS, Rivets, Studs, Washers.

Bethlehem Steel Co., Bethlehem, Pa.  
Progressive Mfg. Co., Torrington, Conn.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —Bolts (Track.)

Sweet's Steel Co., Williamsport, Pa.

## BOND BUYERS.

Law & Co., A. M., Spartanburg, S. C.

## BORINGS (Core.)

Kennedy-Riegger Drilling Co., New York.  
Mott Core Drilling Co., Huntington, W. Va.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Sprague & Henwood, Inc., Scranton, Pa.

## BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

## BRASS GOODS.

Mueller Co., Decatur, Ill.

## BRICK (Common Building.)

Friend & Co., Inc., Petersburg, Va.

## —(Vitriified, Paving.)

National Paving Brick Assn., Washington, D. C.

## BRICK and CLAYWORKING MACHINERY.

Steele & Sons, J. C., Statesville, N. C.

## BRIDGE (Operating Machinery.)

Earle Gear & Machine Co., Phila., Pa.

## BRIDGE SLABS.

Kerlow Steel Flooring Co., Jersey City, N. J.

## BRIDGE STRINGERS (Timber Creosoted.)

American Creosote Wks., New Orleans, La.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.

## BRIDGES (Steel.)

American Bridge Co., Pittsburgh, Pa.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Roanoke Iron & Bridge Wks., Roanoke, Va.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BRONZE (Architectural.)

Cincinnati Mfg. Co., Cincinnati, O.  
Heath Company, J. S., Waukegan, Ill.

## BUBBLERS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

## BUCKETS (Clam Shell.)

Owen Bucket Co., Cleveland, Ohio.  
Wellman Engr. Co., Cleveland, O.

## —(Coal.)

Owen Bucket Co., Cleveland, O.  
Wellman Engr. Co., Cleveland, O.

## —(Dredging, Excavating, Sewer, etc.)

Owen Bucket Co., Cleveland, Ohio.  
Wellman Engr. Co., Cleveland, O.

## —(Material Handling.)

Owen Bucket Co., Cleveland, O.  
Wellman Engr. Co., Cleveland, O.

## —(Ore Handling.)

Owen Bucket Co., Cleveland, Ohio.  
Wellman Engr. Co., Cleveland, O.

## —(Rehandling.)

Owen Bucket Co., Cleveland, O.  
Wellman Engr. Co., Cleveland, O.

## —(Sand and Gravel.)

Owen Bucket Co., Cleveland, O.  
Wellman Engr. Co., Cleveland, O.

## BUILDERS and Contractors.

Copper Co., Inc., John W., Washington, D. C.  
Moyer Co., Tilghman, Allentown, Pa.  
White Engineering Corp., J. G., New York.

## BUILDING GRANITE (Finished.)

North Carolina Granite Corp., The, Mount Airy, N. C.

## BUILDINGS (Industrial.)

Ingalls Iron Works Co., Birmingham.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —(Portable Sheet Metal.)

Birmingham Tank Co., Birmingham.

## BULKHEADS.

Shore-Line Builders, Inc., Jacksonville, Fla.  
Snare Corp., Frederick, New York, N. Y.

## BURLAP.

Fulton Bag & Cotton Mills, Atlanta, Ga.

## BUSINESS METHODS.

Ernst & Ernst, New York, N. Y.

## CABLE.

American Cable Co., New York, N. Y.

## —(Elevator.)

American Steel & Wire Co., Chicago, Ill.  
Roebbing's Sons Co., John A., Trenton, N. J.

## CABLE AND WIRE (Electric.)

American Steel & Wire Co., Balto., Md.  
Roebbing's Sons Co., John A., Trenton, N. J.  
Western Electric Co., New York, N. Y.

## CALCIUM CHLORIDE.

Grasselli Chemical Co., Inc., Birmingham.

## CANNING MACHINERY.

Robins & Co., A. K., Baltimore, Md.

## CANVAS.

Fulton Bag & Cotton Mills, Atlanta, Ga.

## CARS (Dump, Industrial, Logging and Mine.)

Southern Iron & Equipment Co., Atlanta, Va.

## CASSIONS (Foundations, Water Wells, etc.)

United Welding Co., Middletown, O.

## CASTINGS (Alloy.)

Cincinnati Steel Castings Co., Cincinnati, Ohio.

## —(Brass, Bronze and Aluminum.)

Richmond Foundry & Mfg. Co., Richmond, Va.

## —(Chilled Iron.)

Fuller Lehigh Co., Fullerton, Penna.

## —(Gray Iron.)

Fuller Lehigh Co., Fullerton, Penna.  
Glamorgan Pipe & Fdy. Co., Lynchburg, Va.

## —(Semi-Steel.)

Jefferson Foundry Co., Birmingham, Ala.  
Salem Foundry & Mach. Wks., Salem, Va.

## —(Steel.)

Cincinnati Steel Castings Co., Cincinnati, Ohio.

Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.  
Lunkensheimer Co., Cincinnati, Ohio.

## CEMENT (Portland.)

Alpha Portland Cement Corp., Birmingham, Ala.

## CHAIRS (Opera and Theatre.)

Andrews Co., A. H., Chicago, Ill.

## CHANNELS (Steel, Hot Rolled.)

Atlantic Steel Co., Atlanta, Ga.

## CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham.

## CHEMISTS, CHEMICAL ENGINEERS (Analytical.)

Proehling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
Pittsburgh Testing Laboratories, Pittsburgh, Pa.

## —(Consulting, Paper Industry.)

Proehling & Robertson, Inc., Richmond, Va.

## CHIMNEYS (Concrete.)

Rust Engineering Co., Birmingham, Ala.

## —(Radial Brick.)

Rust Engineering Co., Birmingham, Ala.

## CHUTES (Mail.)

Cutler Mail Chute Co., Rochester, N. Y.

## CIRCUIT BREAKERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

## CLUTCHES (Friction.)

Caldwell Co., Inc., W. E., Louisville, Ky.

## COAL (Bituminous.)

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

## COAL and Ash-Handling Mch.

Shepard Niles Crane & Hoist Corp., Mount Airy, N. Y.

## —Jigs.

Steward Machine Co., Chas. C., Birmingham, Ala.

## —Tipples.

American Bridge Co., Pittsburgh, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —Washers.

Steward Machine Co., Chas. C., Birmingham, Ala.

## COKE.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

## CONCRETE Construction (Reinforced.)

Rust Engineering Co., Birmingham, Ala.

## CONCRETE MIXERS.

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Jaeger Machine Co., Columbus, Ohio.

## CONDENSERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

## CONDUITS (Electric, Interior, Steel.)

Western Electric Co., New York, N. Y.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

## CONTRACTORS (Bridge.)

Hardaway Contracting Co., Columbus, Ga.  
Snare Corp., Frederick, New York, N. Y.

## —(Drainage and Dredging.)

Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

## —Drilling.

Kennedy-Riegger Drilling Co., New York City.  
Mott Core Drilling Co., Huntington, W. Va.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Sprague & Henwood, Inc., Scranton, Pa.

## —(Electrical.)

Walker Electrical Co., Atlanta, Ga.  
Warner Service Co., Knoxville, Tenn.  
Webb Electric Co., Anderson, S. C.

## —(Foundations and Dams.)

Snare Corp., Frederick, New York, N. Y.

**CONTRACTORS (General.)**

Blair, Algernon, Montgomery, Ala.  
Burtis, Inc., J. V. & B. T., New Orleans.  
Connell Young Co., Inc., Macon, Ga.  
Coyne & Co., Inc., John W., Washington, D. C.  
Fiske-Carter Constr. Co., Greenville, S. C.  
Hullman-MacQueen Construction Co., Birmingham.  
Harr Corp., Frederick, New York, N. Y.  
White Engineering Corp., J. G., New York.

**(Industrial Buildings.)**

Blair, Algernon, Montgomery, Ala.  
Coyne & Co., Inc., John W., Washington, D. C.  
Fiske-Carter Constr. Co., Greenville, S. C.  
Lockwood Greene Engrs., Inc., Boston.  
Hullman-MacQueen Construction Co., Birmingham, Ala.  
Harr Corp., Frederick, New York, N. Y.  
White Engineering Corp., J. G., New York.

**(Mill Village.)**

Humboldt Contracting Co., Atlanta, Ga.

**(Power Piping.)**

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Poe Piping & Heating Co., Greenville, S. C.

**(Power Plants.)**

Harr Corp., Frederick, New York, N. Y.

**(Railroad.)**

Connell-Young Co., Inc., Macon, Ga.

**(Reinforced Concrete.)**

Blair, Algernon, Montgomery, Ala.  
Quinn Conc. & Constr. Co., Kansas City.

**(Road and Street Paving.)**

Fiske-Carter Constr. Co., Greenville, S. C.  
Humboldt Contracting Co., Atlanta, Ga.  
McCrory Co., J. B., Atlanta, Ga.

Harr Corp., Frederick, New York, N. Y.

**(Sewerage and Waterworks.)**

Hardaway Contracting Co., Columbus, Ga.  
Humboldt Contracting Co., Atlanta, Ga.  
Layne & Bowler, Inc., Memphis, Tenn.  
McCrory Co., J. B., Atlanta, Ga.  
Harr Corp., Frederick, New York, N. Y.

**(Sprinkler System.)**

Poe Piping & Heating Co., Greenville, S. C.

**(Towing and Barging.)**

Shell Producers Co., Tampa, Fla.

**CONTRACTORS MACHINERY AND SUPPLIES.**

(Used.)  
Lima Excavator Sales Agency, Lima, Ohio.  
Marine Metal & Supply Co., New York.

**CONTRACT WORK WANTED.**

(See following classifications:)  
Castings.  
Foundries and Machine Shops.  
Machinery (Special).  
Ornamental Iron Work.  
Patterns (Drawing, etc.).  
Sheet Metal Work.  
Structural Steel and Iron.

**CONVEYING AND ELEVATING MACHINERY.**

Cleveland Crane & Engr. Co., Wickliffe, Ohio.  
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

**CRANES.**

Austin-Western Road Machinery Co., Chicago.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Crawler.)**

Austin-Western Road Machinery Co., Chicago, Ill.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Crawling Tractor.)**

Austin-Western Road Machinery Co., Chicago, Ill.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Electric Traveling.)**

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

(Full Circle Steam and Electric.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Gasoline.)**

Austin-Western Road Machinery Co., Chicago, Ill.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Jib.)**

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

**(Locomotive.)**

Bucyrus-Erie Co., So. Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**(Material Handling.)**

Austin-Western Road Machinery Co., Chicago, Ill.  
Bay City Shovels, Inc., Bay City, Mich.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

—(Travelling, hand power.)  
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.  
Wright Mfg. Co., Bridgeport, Conn.

**CREOSOTE OIL.**

American Creosote Wks., New Orleans, La.  
Ayer & Lord Tie Co., Chicago, Ill.

**CREOSOTED WOOD MATERIALS.**

American Creosote Wks., New Orleans, La.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.  
Eppinger & Russell Co., New York, N. Y.  
Gulf States Creos. Co., Hattiesburg, Miss.  
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

**CROSS ARMS, TIES (Creosoted.)**

American Creosote Wks., New Orleans, La.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.  
Eppinger & Russell Co., New York, N. Y.

**CRUSHED STONE (Road Concrete and Ballast.)**

American Limestone Co., Knoxville, Tenn.  
Boxley & Co., W. W., Roanoke, Va.  
Culbert & Sons, W. F., Marion, Va.

**CRUSHERS (Coal and Coke.)**

Fuller Lehigh Co., Fullerton, Pa.  
Steward Machine Co., Chas. C., Birmingham, Ala.

**(Rock.)**

Gründler Crusher & Pulverizer Co., St. Louis, Mo.

**CRUSHING and Pulverizing Machinery.**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Austin-Western Road Machinery Co., Chicago, Ill.  
Fuller Lehigh Co., Fullerton, Pa.  
Gründler Crusher & Pulverizer Co., St. Louis, Mo.

**CULVERT PIPE (Cast Iron.)**

Cast Iron Pipe Research Assn., Chicago.  
U. S. Pipe & Foundry Co., Burlington, N. J.

**(Corrugated Metal.)**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

**CYLINDERS (Compressed Air, Gas.)**

National Tube Co., Pittsburgh, Pa.

**DESKS (School.)**

Andrews Co., A. H., Chicago, Ill.

**DITCHING MACHINERY.**

Bay City Shovels, Inc., Bay City, Mich.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**DOORS (Cabinet Woodwork.)**

Mitchell Mfg. Co., Robert, Cincinnati, O.

**(Fireproof, Air Chamber.)**

Wilson Corp., The J. G., New York.

**(Kalamain and Hollow Metal.)**

Cincinnati Mfg. Co., Cincinnati, O.

**(Rolling, Steel and Wood.)**

Wilson Corp., The J. G., New York.

**(Vault.)**

York Safe & Lock Co., York, Penna.

**DRAFTSMEN'S SUPPLIES.**

Weber Co., Inc., F., Philadelphia, Pa.

**DRAGLINE EXCAVATORS.**

Bucyrus-Erie Co., So. Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**DREDGES (Dipper, Elevator, Hydraulic.)**

Bay City Shovels, Inc., Bay City, Mich.  
Bucyrus-Erie Co., So. Milwaukee, Wis.

**DREDGING (River and Harbor Improvement.)**

Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.  
Shell Producers Co., Tampa, Fla.

**DRILLS (Diamond and Shot Core.)**

Sprague & Henwood, Inc., Scranton, Pa.  
Virginia Machinery & Well Co., Inc., Richmond, Va.

**DRINKING FOUNTAINS.**

Rundle-Spence Mfg. Co., Milwaukee, Wis.

**DYNAMITE (Industrial and Agricultural.)**

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

**ECONOMIZERS (Fuel.)**

Babcock & Wilcox Co., New York, N. Y.

**ECONOMISTS (Administrative.)**

Brookshire Economic Service, New York.

**ELECTRICAL Instruments and Supplies.**

General Electric Co., Schenectady, N. Y.  
Western Electric Co., New York, N. Y.

**ELECTRICAL MACHINERY**

(Generators, Motors, etc., New.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Partridge, Arthur S., St. Louis, Mo.  
Rockford Power Machy. Co., Rockford, Ill.

**(Generators, Motors, etc., Used.)**

Delta Equipment Co., Philadelphia, Pa.  
Electric Service Co., Cincinnati, Ohio.  
General Electric Co., Schenectady, N. Y.  
O'Brien Machinery Co., The, Phila., Pa.  
Reading Engineering Wks., Reading, Pa.  
Rockford Power Machy. Co., Rockford, Ill.

**(Repairing (Motors, Generators, etc.))**

Electric Service Co., Cincinnati, Ohio.

**ELECTRIC LIGHTING.**

General Electric Vapor Lamp Co., Hoboken, N. J.  
Westinghouse Lamp Co., New York City.

**ELECTRIC SHOVELS (See Shovels.)**

**ELECTRICAL MACHINERY**

(Generators, Motors, etc., New.)  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**ELEVATORS (Electric.)**

Millner Co., St. Louis, Mo.

**(Hand and Belt Power.)**

Millner Co., St. Louis, Mo.

**ENGINEERS (Airports.)**

Lockwood Greene Engrs., Inc., New York.

**(Appraisal.)**

Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York.

**(Bridge.)**

Gardner & Howe, Memphis, Tenn.  
Hardaway Contracting Co., Columbus, Ga.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

**(Chemical.)**

Dow & Smith, New York, N. Y.  
Picard Laboratories, Birmingham, Ala.

**(Civil.)**

Gardner & Howe, Memphis, Tenn.  
Harrub Engr. Co., C. N., Nashville, Tenn.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Spring, Chas. Herbert, Greensboro, N. C.  
Steel & Leiby, Knoxville, Tenn.  
White Engineering Corp., J. G., New York.

**(Consulting.)**

Barstow & Co., W. E., New York City.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Goder, Joseph, Chicago, Ill.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

**(Cost.)**

Ernst & Ernst, New York, N. Y.

**(Dams.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.

**(Drainage and Irrigation.)**

Huey, S. E., Monroe, La.

**(Efficiency.)**

Ernst & Ernst, New York, N. Y.

**(Electrical.)**

Engineering Service Corp., Houston, Tex.  
Lee Engineering Corp., William S., Charlotte, N. C.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Webb Electric Co., Anderson, S. C.  
Wiley & Wilson, Lynchburg, Va.

**(Electric Light and Power.)**

Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.

Lee Engineering Corp., William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York, N. Y.  
Wiley & Wilson, Lynchburg, Va.

**(Gas.)**

Byllesby Engineering and Management Corp., Chicago, Ill.  
Huey, S. E., Monroe, La.

**(Geological.)**

Fröhling & Robertson, Inc., Richmond, Va.

**(Harbor Improvements.)**

Engineering Service Corp., Houston, Tex.

**(Heating.)**

Wiley & Wilson, Lynchburg, Va.

**(Hydraulic.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Main, Inc., Chas. T., Boston, Mass.  
Wiley & Wilson, Lynchburg, Va.

**(Hydro-electric.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.

**(Ice and Refrigerating.)**

Engineering Service Corp., Houston, Tex.

**(Industrial Plants.)**

Barstow & Co., W. S., New York City.  
Consoer, Older & Quinlan, Inc., Chicago.  
Converse & Co., J. B., Mobile, Ala.  
Gardner & Howe, Memphis, Tenn.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Preacher & Co., Inc., G. Lloyd, Atlanta.  
Sirtine & Co., J. E., Greenville, S. C.  
Smith, Elroy G., Augusta, Ga.  
Wiley & Wilson, Lynchburg, Va.

**(Industrial Survey.)**

Converse & Co., J. B., Mobile, Ala.  
Lockwood Greene Engrs., Inc., New York.

**(Inspection and Tests.)**

Dow & Smith, New York, N. Y.  
Fröhling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
McCallum Inspection Co., Norfolk, Va.  
Picard Laboratories, Birmingham, Ala.

**(Lighting.)**

Byllesby Engineering and Management Corp., Chicago, Ill.  
General Electric Vapor Lamp Co., Hoboken, N. J.  
Westinghouse Lamp Co., New York City.  
Wiley & Wilson, Lynchburg, Va.

**(Mechanical.)**

Engineering Service Corp., Houston, Tex.  
Lee Engineering Corp., William S., Charlotte, N. C.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Wiley & Wilson, Lynchburg, Va.

**(Mining. See Engineers, Geological.)**

**(Municipal.)**

Consoer, Older & Quinlan, Inc., Chicago.  
Dow & Smith, New York, N. Y.  
Harrub Engr. Co., C. N., Nashville, Tenn.  
Huey, S. E., Monroe, La.  
McCrory Co., The J. B., Atlanta, Ga.  
Wiley & Wilson, Lynchburg, Va.

**(Paving and Roads.)**

Dow & Smith, New York, N. Y.  
Harrub Engr. Co., C. N., Nashville, Tenn.

**(Printing and Newspaper Plants.)**

Lockwood Greene Engrs., Inc., New York.

**(Public Service Properties.)**

Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York.

**(Railroad.)**

Huey, S. E., Monroe, La.

**(Reinforced Concrete Bridges, Buildings, etc.)**

Gardner & Howe, Memphis, Tenn.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Steel & Leiby, Knoxville, Tenn.

**(Sanitary.)**

Whitman, Regard & Smith, Balto., Md.  
Wiley & Wilson, Lynchburg, Va.

**(Sewage Disposal Plants.)**

McCrory Co., The J. B., Atlanta, Ga.  
Wiedeman and Singleton, Inc., Atlanta.  
Wiley & Wilson, Lynchburg, Va.

**(Sewerage and Waterworks.)**

Consoer, Older & Quinlan, Inc., Chicago.  
Hardaway Contracting Co., Columbus, Ga.



**Harrub Engr. Co., C. N., Nashville, Tenn.**  
**White Engr. Corp., J. G., New York, N. Y.**  
**Wiedeman & Singleton, Inc., Atlanta, Ga.**  
**Wiley & Wilson, Lynchburg, Va.**

—(Structural.)

**Huey, S. E., Monroe, La.**  
**Lockwood Greene Engrs., Inc., New York, N. Y.**  
**Saxe, Van Rensselaer P., Baltimore, Md.**  
**Virginia Bridge & Iron Co., Roanoke, Va.**

—(Textile Mills.)

**Lockwood Greene Engrs., Inc., New York, N. Y.**  
**Main, Inc., Chas. T., Boston, Mass.**  
**Birline & Co., J. E., Greenville, S. C.**

—(Ventilating and Heating.)

**Wiley & Wilson, Lynchburg, Va.**

—(Water Supply.)

**Wiley & Wilson, Lynchburg, Va.**

**ENGINES (Compressed Air.)**

**Dake Engine Co., Grand Haven, Mich.**

—(Diesel Type.)

**Fairbanks, Morse & Co., Chicago, Ill.**  
**Superior Engine Co., Springfield, O.**

—(Gas and Gasoline.)

**Sterling Engine Co., Buffalo, N. Y.**

—(Marine.)

**Fairbanks, Morse & Co., Chicago, Ill.**

—(Steam.)

**Allis-Chalmers Mfg. Co., Milwaukee, Wis.**  
**Schofield's Sons Co., J. S., Macon, Ga.**

**ENVELOPES.**

**Young & Selden Co., Baltimore, Md.**

**ESTIMATORS (Building & Construction.)**

**Spring, Chas. Herbert, Greensboro, N. C.**

**EXCAVATING MACHINERY.**

**Austin-Western Road Machinery Co., Chicago, Ill.**

**Bay City Shovels, Inc., Bay City, Mich.**  
**Bucyrus-Erie Co., So. Milwaukee, Wis.**  
**Northwest Engineering Co., Chicago, Ill.**  
**Owen Bucket Co., The, Cleveland, Ohio.**

**EXCAVATORS (Clamshell and Orange Peel.)**

**Northwest Engineering Co., Chicago, Ill.**  
**Ohio Power Shovel Co., Lima, Ohio.**

—(Dragline. See Dragline Excavators.)

—(Trench.)

**Bay City Shovels, Inc., Bay City, Mich.**  
**Bucyrus-Erie Co., So. Milwaukee, Wis.**  
**Ohio Power Shovel Co., Lima, Ohio.**

**EXPANSION JOINTS (Road and Street.)**

**Carey Co., Philip, Lockland, Cincinnati, Ohio.**

**EXPLOSIVES.**

**Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.**

**FACTORY Management Systems.**

**Ernst & Ernst, New York, N. Y.**

**FEED-WATER HEATERS and Purifiers.**

**American Water Softener Co., Phila., Pa.**  
**International Filter Co., Chicago, Ill.**

**FENCING, ENTRANCE GATES (Iron, Steel and Wire.)**

**American Steel and Wire Co., Balto., Md.**  
**Atlantic Steel Co., Atlanta, Ga.**  
**Cyclone Fence Co., Waukegan, Ill.**

**FENCING (Field and Industrial, Wire Woven.)**

**American Steel and Wire Co., Balto., Md.**  
**Cyclone Fence Co., Waukegan, Ill.**  
**Gulf States Steel Co., Birmingham, Ala.**

**FERTILIZER Mixing Plants.**

**Gruendler Crusher & Pulverizer Co., St. Louis, Mo.**

**FILTER (For Domestic and Industrial Purposes.)**

**American Water Softener Co., Phila., Pa.**  
**Eschbach & Co., E. W., Kansas City, Mo.**  
**International Filter Co., Chicago, Ill.**  
**Roberts Filter Mfg. Co., Darby (Phila.).**

**FINANCING.**

**Electric Bond & Share Co., New York.**

**FIREPROOF Building Material.**

**Bannon Pipe Co., Louisville, Ky.**

—Doors and Shutters.

**Wilson Corp., The J. G., New York City.**

**FITTINGS (Wire Rope.)**

**American Steel & Wire Co., Chicago, Ill.**  
**Roebeling's Sons Co., John A., Trenton, N. J.**

**FLANGES (Iron and Steel.)**

**Dart Mfg. Co., E. M., Providence, R. I.**  
**U. S. Pipe & Foundry Co., Burlington, N. J.**

**FLOOR (Asphalt Mastic.)**

**Barber Asphalt Co., Philadelphia, Pa.**

—(Northern Hard Maple.)

**Holt Hardwood Co., Oconto, Wis.**

—(Open Steel.)

**Kerlow Steel Flooring Co., Jersey City, N. J.**

**FLOOR Plates and Stair Treads.**

**Central Iron & Steel Co., Harrisburg, Pa.**

**FLOORING (Laid and Finished.)**

**Osborne, Earl N., Roanoke, Va.**

**FORMED PRODUCTS (Roofing.)**

**American Rolling Mill Co., Middletown, O.**

**FOUNDRIES and Machine Shops.**

**General Machine Works, York, Pa.**  
**Glamorgan Pipe & Fdy. Co., Lynchburg, Va.**  
**Richmond Foundry & Mfg. Co., Richmond, Va.**

**FOUNDRY Equipment and Supplies.**

**Hill & Griffith Co., Cincinnati, O.**

**FOUNDRY FACINGS (Talc and Soapstone.)**

**Hill & Griffith Co., Cincinnati, O.**

**FURNACES (Water-Cooled.)**

**Fuller Lehigh Co., Fullerton, Pa.**

**GALVANIZED Products.**

**Bessemer Galvanizing Works, Bessemer, Ala.**  
**Cattle & Bros., Jos. P., Philadelphia, Pa.**

—Steel and Iron.

**American Rolling Mill Co., Middletown, O.**  
**American Sheet & Tin Plate Co., Pittsburgh, Pa.**

**GAS (Domestic, Industrial Use.)**

**American Gas Assn., New York, N. Y.**  
**Associated Gas & Elec. System, New York, N. Y.**

**GAS HOLDERS.**

**Chattanooga Boiler & Tank Co., Chattanooga, Tenn.**  
**Chicago Bridge & Iron Wks., Birmingham, Ala.**  
**McClintic-Marshall Corp., Bethlehem, Pa.**

**GASOLINE and KEROSENE.**

**Gulf Refining Co., Pittsburgh, Pa.**

**GEARS.**

**Earle Gear & Machine Co., Phila., Pa.**  
**General Electric Co., Schenectady, N. Y.**

**GENERATORS, MOTORS (New.)**

**General Electric Co., Schenectady, N. Y.**  
**Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**

—(Used.)

**Guyon Machine Shops, Logan, W. Va.**  
**O'Brien Machinery Co., Phila., Pa.**

**GEOLOGISTS. (See Engineers Geological.)**

**GLASS. (Window.)**

**Pittsburgh Plate Glass Co., Pittsburgh.**

**GRADERS (Elevating.)**

**Austin-Western Road Machinery Co., Chicago, Ill.**  
**Caterpillar Tractor Co., Peoria, Ill.**  
**Gallion Iron Wks. & Mfg. Co., Gallion, O.**

**GRANITE (Building and Monumental.)**

**Gardner Brothers, Salisbury, N. C.**  
**North Carolina Granite Corp., The, Mount Airy, N. C.**

**GRATES and Grate Bars.**

**Schofield's Sons Co., J. S., Macon, Ga.**

**GRATING (Area, Flooring, Sidewalk.)**

**Kerlow Steel Flooring Co., Jersey City, N. J.**

**GRAVEL (Roofing and Road.)**

**American Limestone Co., Knoxville, Tenn.**  
**Arundel Corp., The, Baltimore, Md.**  
**Boxley & Co., W. W., Roanoke, Va.**  
**Friend & Co., Inc., Petersburg, Va.**

**GREASE CUPS.**

**Lunkenheimer Co., The, Cincinnati, O.**

**GRILLES (Brass, Bronze, Steel, etc.)**

**Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.**

**GRINDERS WHEELS.**

**Carborundum Co., Niagara Falls, N. Y.**

**GUARD RAIL (Road.)**

**National Traffic Guard Co., Atlanta, Ga.**

**GUNITE CONSTRUCTION.**

**Gunite Conc. & Constr. Co., Kansas City.**  
**Gunite Constr. Co., New York City.**

**GUNPOWDER.**

**Du Pont de Nemours & Co., E. I., Wilmington, Del.**

**GUNS (Hydraulic.)**

**Georgia Iron Works, Augusta, Ga.**

**HANGARS (Airplane.)**

**Ingalls Iron Works, Birmingham, Ala.**

**HARBOR IMPROVEMENTS.**

**Arundel Corp., Baltimore, Md.**  
**Atlantic, Gulf & Pacific Co., New York.**

**HEATERS (Asphalt.)**

**Honhorst Co., Jos., Cincinnati, O.**

**HEATING Apparatus (Engineers and Contractors.)**

**Poe Piping & Heating Co., Greenville, S. C.**

**HOISTS (Chain.)**

**Cleveland Crane & Engr. Co., Wickliffe, O.**  
**Wright Mfg. Co., Bridgeport, Conn.**

—(Electric, Gasoline.)

**Dake Engine Co., Grand Haven, Mich.**

—(Steam.)

**Dake Engine Co., Grand Haven, Mich.**

**HOTELS.**

**Southern Hotel, The, Baltimore, Md.**

**HYDRANTS (Fire.)**

**Ludlow Valve Mfg. Co., The, Troy, N. Y.**  
**Myers & Bros. Co., The, F. E., Ashland, Ohio.**

**HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)**

**Crisp County Power Commission, Cordele, Ga.**  
**Seaboard Public Service Co., Alexandria, Va.**  
**Texas Power & Light Co., Dallas, Texas.**

**INCINERATORS.**

**Brooks-Fisher Co., Atlanta, Ga.**  
**D-N Corporation, Winston-Salem, N. C.**  
**Goder, Joseph, Chicago, Ill.**

**INCORPORATORS.**

**Delaware Registration Trust Co., Wilmington, Del.**

**INSULATING Materials**

**General Electric Co., Schenectady, N. Y.**

—Quilt.

**Cabot, Inc., Samuel, Boston, Mass.**

**INVESTMENT SECURITIES.**

**Electric Bond & Share Co., New York.**

**IRON.**

—(Ingot, for Culverts, etc.)  
**American Rolling Mill Co., Middletown, O.**

**JAIL CELLS.**

**Roanoke Iron & Bridge Wks., Roanoke, Va.**

**JOINTS (Pipe.)**

**Leadite Co., Philadelphia, Pa.**

**KETTLES (Pavers and Roofers.)**

**Honhorst Co., Jos., Cincinnati, O.**

**LADDERS (Rolling.)**

**Myers & Bro. Co., The F. E., Ashland, O.**

**LAMPS (Incandescent.)**

**General Electric Vapor Lamp Co., Hoboken, N. J.**  
**Western Electric Co., New York, N. Y.**  
**Westinghouse Lamp Co., New York City.**

**LIGHTING (Factory and Mill.)**

**General Electric Vapor Lamp Co., Hoboken, N. J.**  
**Westinghouse Lamp Co., New York City.**

—Fixtures (Electric.)

**Western Electric Co., New York City.**  
**Westinghouse Lamp Co., New York City.**

**LININGS (Flue, Fire Clay.)**

**Lee Clay Products Co., Clearfield, Ky.**  
**Owensboro Sewer Pipe Co., Owensboro, Ky.**

—(Tube Mill.)

**Fuller Lehigh Co., Fullerton, Pa.**

**LITHOGRAPHERS and ENGRAVERS.**

**Smith & Son Co., Oscar T., Balto., Md.**  
**Young & Selden Co., Baltimore, Md.**

**LOADING and UNLOADING MACHINERY (Portable.)**

**Northwest Engineering Co., Chicago, Ill.**

**LOCOMOTIVES. (Gasoline.)**

**Whitcomb Locomotive Co., Rochelle, Ill.**

—(Industrial.)

**Southern Iron & Equipment Co., Atlanta.**  
**Whitcomb Locomotive Co., Rochelle, Ill.**

—(Mining.)

**Whitcomb Locomotive Co., Rochelle, Ill.**

—(Railway.)

**Southern Iron & Equipment Co., Atlanta.**  
**Whitcomb Locomotive Co., Rochelle, Ill.**

**LUBRICANTS.**

**Gulf Refining Co., Pittsburgh, Pa.**

**LUBRICATORS (Force Feed.)**

**Lunkenheimer Co., The, Cincinnati, O.**

**LUMBER (Creosoted.)**

**Amer. Creosote Wks., Inc., New Orleans.**  
**Atlantic Creosoting Co., Norfolk, Va.**  
**Ayer & Lord Tie Co., Inc., Chicago.**  
**Century Wood Preserving Co., Balto., Md.**  
**Eppinger & Russell Co., New York, N. Y.**  
**Gulf States Creos. Co., Hattiesburg, Miss.**  
**National Lumber & Creosoting Co., Arkansas, Ark.-Tex.**

**MACHINERY (Special.)**

**Bertsch & Co., Cambridge City, Ind.**  
**Earle Gear & Machine Co., Phila., Pa.**  
**General Machine Works, York, Pa.**  
**Gerding Bros., Cincinnati, O.**

**MACHINERY and Supplies (New and Used.)**

**Electric Service Co., Cincinnati, Ohio.**  
**Guyon Machine Shops, Logan, W. Va.**  
**Marine Metal & Supply Co., New York.**  
**O'Brien Machinery Co., The, Phila., Pa.**  
**Partridge, Arthur S., St. Louis, Mo.**  
**Reading Engineering Wks., Reading, Pa.**

**MACHINE TOOLS. (Used.)**

**Delta Equipment Co., Philadelphia, Pa.**  
**O'Brien Machinery Co., Philadelphia, Pa.**

**MAIL CHUTES.**

**Cutler Mail Chute Co., Rochester, N. Y.**

**MARBLE (Producers and Manufacturers.)**

**Georgia Marble Co., The, Tate, Ga.**

**METAL Cutting Machinery.**

**Earle Gear & Machine Co., Phila., Pa.**

**METAL STAMPING.**

**Gerding Bros., Cincinnati, O.**

**MIXERS (Plaster and Mortar.)**

**Dunning & Boschert Press Co., Syracuse, N. Y.**  
**Jaeger Machine Co., Columbus, Ohio.**

**MOTORS (Electric.)**

**Allis-Chalmers Mfg. Co., Milwaukee, Wis.**  
**Armstrong & Bro. Co., R. S., Atlanta, Ga.**  
**Fairbanks, Morse & Co., Chicago, Ill.**  
**General Electric Co., Schenectady, N. Y.**  
**Western Electric Co., New York City.**  
**Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**

**MOTOR TRUCKS.**

**International Harvester Co. of America, Inc., Chicago, Ill.**

**NAILS (Cut.)**

**Reading Iron Co., Reading, Pa.**

**NAILS and Spikes.**

**American Steel & Wire Co., Balto., Md.**  
**Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.**  
**Youngstown Sheet & Tube Co., Youngstown, Ohio.**

IF YOUR PROPERTY IS WORTH OWNING  
... IT'S WORTH PROTECTING



**..nothin doin' at dis joint"**

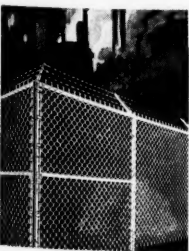
*A whispered conference in the dark . . .  
"Well—let's try the next plant. It's a pipe  
—and a clean get-away, too."*

Some people don't like Cyclone Fence—and its obvious why they shouldn't. They much prefer the property that's open, or enclosed with wooden fence which hides their movements.

That's why property protected by Cyclone Fence has been markedly free from disturbance during the rising epidemic of lawlessness. Even when the prowler gets in, this sturdy steel enclosure has him like a rat in a trap.

Yet protection is only one of the many reasons for erecting Cyclone Fence. It is the most efficient method known to CONTROL movements of labor and material, in and out of your property. Provides safe storage in yards. Protects you from liability charges. Adds to the appearance of the grounds.

Because it serves in so many ways, we analyze the fence requirements of every plant with old-fashioned thoroughness. Even the erection is done by a factory-trained crew. The result is evident—installations made years ago are still serving today.



The Cyclone copper-steel fence we now recommend has been constantly improved, and today is far more enduring than ever. A Cyclone sales engineer will be glad to go over your property and submit the most practical and economical method of protecting it. Write today.

### CYCLONE FENCE COMPANY

General Offices: Waukegan, Ill.  
Branch Offices in All Principal Cities

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division:  
Standard Fence Company, Oakland, Calif.

Cyclone is not a "type" of fence but fence made exclusively by Cyclone Fence Company and identified by this trademark.

# Cyclone Fence

REG. U.S. PAT. OFF.



## "The Prettiest Wood-Shingle Roof in These Parts"



Four Houses in the Charles Armstrong Development, Philadelphia, Roofed with Cabot's Stained Shingles, Stained with Cabot's Creosote Shingle and Wood Stains and laid in variegated patterns.

Mr. Charles Armstrong says the second of these houses has "the prettiest wood shingle roof in these parts." All the group have shingle roofs stained with Cabot's Creosote Shingle and Wood Stains. Mr. Armstrong knows how wonderfully their colors last and that the Creosote in them preserves the wood far beyond its natural life.

Send coupon below for Color Card and full description of Cabot's Creosote Shingle and Wood Stains.

### Cabot's Creosote Shingle and Wood Stains

Standard for nearly 50 years  
Made by the makers of Cabot's Heat-Insulating, Sound-Deadening Quilt.

Send to: **L. L. Cabot**  
141 Milk Street, Boston, Mass.  
Gentlemen: Please send me your Color Card and full description Cabot's Creosote Shingle and Wood Stains.  
Name \_\_\_\_\_  
Address \_\_\_\_\_ MR-4-32

### SALT GLAZED SEWER AND CULVERT PIPE

Wall Coping, Drain Tile, Flue Lining, Chimney Tops, Hollow Tile, Fire Proofing, Vitrified Brick, Fire Brick

BANNON'S PATENT LIDDED PIPE FOR STEAM CONDUITS

BANNON PIPE CO. LOUISVILLE, KY.

### FIRE CLAY, SEWER PIPE, FLUE LINERS and WALL COPING

Write for Catalogue and Discounts

Owensboro Sewer Pipe Co. Owensboro, Ky.

### THE GEORGIA MARBLE COMPANY

Producers and Manufacturers of

### GEORGIA MARBLE

Tate, Georgia

Atlanta Chicago Cleveland Dallas New York

# GRANITE

## WHITE MOUNT AIRY

THE NORTH CAROLINA GRANITE CORP'N.  
Mount Airy, N. C.



**OIL (Fuel and Gas.)**  
Gulf Refining Co., Pittsburgh, Pa.

—Cups.  
Lunkenheimer Co., The, Cincinnati, O.

**ORE-WASHING MACHINERY.**  
Georgia Iron Works, Augusta, Ga.

**ORNAMENTAL Bronze Work.**  
Heath Co., J. S., Waukegan, Ill.

**ORNAMENTAL Iron Work.**  
Austin Bros. Bridge Co., Atlanta, Ga.  
Dietrich Bros., Baltimore, Md.  
Roanoke Iron & Bridge Wks., Roanoke, Va.  
Snead Architectural Iron Works, Louisville, Ky.  
Virginia Bridge & Iron Co., Roanoke, Va.

**ORNAMENTAL Metal Work.**  
(Bronze, Iron, Steel, etc.)  
Cincinnati Mfg. Co., Cincinnati, O.

**PAINT (Preservative.)**  
Cabot, Inc., Samuel, Boston, Mass.

**PANELBOARDS.**  
Adam Electric Co., Frank, St. Louis.

**PARTITIONS (Sectionfold, Rolling, Wood.)**  
Wilson Corp., The, J. G., New York.

**PATENT ATTORNEYS.**  
Buck, Sterling P., Washington, D. C.  
Coleman, Watson E., Washington, D. C.  
Eaton, Paul B., Charlotte, N. C.  
Sasnett, Edward C., Washington, D. C.  
Seymour & Bright, Washington, D. C.

**PAVING (Asphaltic Concrete.)**  
Culbert & Sons, W. F., Marion, Va.

**PAVING Blocks (Creosoted Wood.)**  
American Creosote Works, New Orleans.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.

**PENSTOCKS.**  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Smith Co., S. Morgan, York, Pa.

**PERFORATED METAL.**  
Chicago Perforating Co., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perf. Co., Chicago.  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.  
Mundt & Sons, Charles, Jersey City, N. J.

**PETROLEUM REFINERS.**  
Gulf Refining Co., Pittsburgh, Pa.

**PIG-IRON.**  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**PILES, POSTS, Poles (Creosoted.)**  
American Creosote Wks., New Orleans, La.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.  
Lumber & Creosoting Co., Texarkana, Ark.-Tex.

**PILING—(Steel Sheet.)**  
Carnegie Steel Co., Pittsburgh, Pa.

—(Yellow Pine.)  
Century Wood Preserving Co., Balto., Md.

**PIPE.**  
Albert & Davidson Pipe Corp., Brooklyn, N. Y.

—(Second-Hand.)  
Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Brooklyn, N. Y.  
Central Pipe & Sup. Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.

Hudson Pipe & Supply Co., Bayonne, N. J.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
McDowell Pipe Corp., Brooklyn, N. Y.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Standard Piping & Fitting Co., Phila.  
Wides Pipe & Supply Co., Cincinnati, O.

—(Cast Iron.)  
Cast Iron Pipe Research Assn., Chicago.  
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.  
U. S. Pipe & Fdry. Co., Burlington, N. J.

—(Hammer-Welded.)  
National Tube Co., Pittsburgh, Pa.

—(Iron and Steel, Spiral.  
Welded.)  
American Rolling Mill Co., Middletown, O.

—(Second-Hand.)  
Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Brooklyn, N. Y.  
Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Marine Metal & Supply Co., New York.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
McDowell Pipe Corp., Brooklyn, N. Y.  
Wides Pipe & Supply Co., Cincinnati, O.

—(Steel.)  
Bethlehem Steel Co., Bethlehem, Pa.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Standard Piping & Fitting Co., Phila.  
Youngtown Sheet & Tube Co., Youngstown, Ohio.

—(Wrought Iron.)  
Reading Iron Co., Reading, Pa.

**PIPE (Fittings.)**  
Georgia Iron Works, Augusta, Ga.  
Standard Piping & Fitting Co., Phila.

**PIPE Machinery.**  
Quinn Wire & Iron Works, Boone, Iowa.

—Unions and Joints.  
Dart Mfg. Co., E. M., Providence, R. I.

—Systems (Industrial.)  
Moore Pipe & Sprinkler Co., Jacksonville, Fla.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Standard Piping & Fitting Co., Phila.

**PLATES (Steel and Iron.)**  
American Rolling Mill Co., Middletown, O.  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**POLES—(Tubular, Steel.)**  
Bessemer Galvanizing Works, Bessemer, Ala.  
National Tube Co., Pittsburgh, Pa.

—(Yellow Pine.)  
Century Wood Preserving Co., Balto., Md.

**POLISHING MACHINERY.**  
(Wheels, Blocks.)  
Carborundum Co., Niagara Falls, N. Y.

**PORCH COLUMNS (Wood.)**  
Schwerd Mfg. Co., A. F., Pittsburgh.

**POSTS (Steel Fence.)**  
Atlantic Steel Co., Atlanta, Ga.

**POWER TRANSMISSION MACHINERY.**  
Shofield's Sons Co., J. S., Macon, Ga.

**PRESSES. (Baling, Cottonseed Oil, Hydraulic and Power.)**  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

**PRINTERS (Book, Catalog, Job.)**  
Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**PULLEYS (Friction Clutch.)**  
Caldwell Co., Inc., W. E., Louisville, Ky.

**PULVERIZED COAL EQUIPMENT.**  
Fuller Lehigh Co., Fullerton, Pa.

**PULVERIZERS. (See Crushing and Pulverizing Machinery.)**

**PUMPING MACHINERY.**  
Fairbanks, Morse & Co., Chicago, Ill.

La Bour Co., Elkhart, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.  
Myers & Bro. Co., The F. E., Ashland, O.  
Virginia Mchry. & Well Co., Richmond, Va.

**PUMPS (Boiler Feed.)**  
DeLaval Steam Turbine Co., Trenton, N. J.  
Myers & Bro. Co., The F. E., Ashland, O.

—(Centrifugal.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
DeLaval Steam Turbine Co., Trenton, N. J.  
Fairbanks, Morse & Co., Chicago, Ill.  
LaBour Co., Elkhart, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.

—(Deep Well.)  
Layne & Bowler, Inc., Memphis, Tenn.

—(Hydraulic.)  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

—(Pulverized Coal.)  
Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)  
Georgia Iron Works, Augusta, Ga.

—(Steam.)  
Fairbanks, Morse & Co., Chicago, Ill.

—(Water Works.)  
Layne & Bowler, Inc., Memphis, Tenn.

**PUNCHING AND SHEARING MACHINERY.**  
Bertsch & Co., Cambridge City, Ind.

**RADIATOR ENCLOSURES.**  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

**RAILINGS (Iron Pipe.)**  
Pipe Railing Constr. Co., Long Island City, N. Y.

**RAILROAD Equipment and Supplies (New.)**  
Robinson & Orr, Pittsburgh, Pa.

—Equipment and Supplies (Used.)  
Dyer Co., W. H., St. Louis, Mo.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron and Equip. Co., Atlanta.

**RAILROAD (Frogs and Switches)**  
Robinson & Orr, Pittsburgh, Pa.

**RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)**  
Missouri Pacific R. R., St. Louis, Mo.  
Model Land Company, Flagler System, St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.

**RAILS (New and Used.)**  
Carnegie Steel Co., Pittsburgh, Pa.  
Dyer Co., W. H., St. Louis, Mo.  
Robinson & Orr, Pittsburgh, Pa.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron & Equip. Co., Atlanta, Ga.  
Sweet's Steel Co., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**RAILWAYS (Marine.)**  
Charleston Dry Dock and Machine Co., Charleston, S. C.

**RECEPTACLES (Self-Closing—Waste Paper.)**  
Whitaker Paper Co., Baltimore, Md.

**REINFORCING for Concrete.**  
American Steel and Wire Co., Balto., Md.  
Atlantic Steel Co., Atlanta, Ga.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Carnegie Steel Co., Pittsburgh, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.

**RIVER & HARBOR IMPROVEMENTS (Dredging, Docks, Wharves, etc.)**  
Arundel Corp., Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

**ROAD and Street Machinery.**  
Austin-Western Road Machinery Co., Chicago, Ill.  
Buffalo-Springfield Roller Co., Springfield, O.

Caterpillar Tractor Co., Peoria, Ill.  
Gallion Iron Wks. & Mfg. Co., Gallion, O.

—and Street Material.  
Boxley & Co., W. W., Roanoke, Va.  
Koppers Products Co., Pittsburgh, Pa.  
Woodstock Slag Corp., Birmingham, Ala.

—Graders and Scrapers.  
Austin-Western Road Machinery Co., Chicago, Ill.  
Caterpillar Tractor Co., Peoria, Ill.  
Gallion Iron Wks. & Mfg. Co., Gallion, O.

—Oils and Preservatives.  
Gulf Refining Co., Pittsburgh, Pa.

—Rollers (Steam and Gasoline.)  
Austin-Western Road Machinery Co., Chicago, Ill.  
Buffalo-Springfield Roller Co., Springfield, O.

—Scarifiers.  
Austin-Western Road Mchry. Co., Chicago, Ill.

Buffalo-Springfield Roller Co., Springfield, O.

**ROOFING (Asphalt Built-Up.)**  
Barber Asphalt Co., Philadelphia, Pa.

—(Ready Prepared, Felt, Tar Asbestos, Asphalt.)  
Ruberoid Co., New York City.

**ROOFING and Siding (Composition.)**  
Ruberoid Co., New York City.

—(Metal.)  
American Rolling Mill Co., Middletown, O.  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Gulf States Steel Co., Birmingham, Ala.  
Youngstown Sheet and Tube Co., Youngstown, O.

**SAFES.**  
York Safe & Lock Co., York, Penna.

**SAND.**  
Arundel Corp., Baltimore, Md.  
Friend & Co., Inc., Petersburg, Va.

**SANITARY Drinking Fountains.**  
Rundle-Spence Mfg. Co., Milwaukee, Wis.

**SAWMILL Machinery.**  
Schofield's Sons Co., J. S., Macon, Ga.

**SAWS (Cold Metal.)**  
Earle Gear and Machine Co., Phila., Pa.

**SCALES (Auto Truck.)**  
Fairbanks, Morse & Co., Chicago, Ill.

**SCRAP IRON AND STEEL.**  
Smith & Co., W. M., Birmingham, Ala.

**SCREEN CLOTH.**  
Seneca Wire & Mfg. Co., Fostoria, Ohio.

**SCREENING (For Concrete and Road Construction.)**  
American Limestone Co., Knoxville, Tenn.

**SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**  
Chicago Perforating Co., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.  
Grundler Crusher & Pulverizer Co., St. Louis, Mo.  
Mundt & Sons, Charles, Jersey City, N. J.

**SCREW-Machine Products.**  
Progressive Mfg. Co., Torrington, Conn.

**SEAWALLS.**  
Shore-Line Builders, Inc., Jacksonville, Fla.

**SEWAGE Disposal Systems.**  
D-N Corporation, Winston-Salem, N. C.

**SEWER Joint Compounds.**  
Leadite Co., Philadelphia, Pa.

—Pipe (Vitrified.)  
Bannon Pipe Co., Louisville, Ky.  
Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.

**SEWER Pipe Machinery.**  
Quinn Wire & Iron Works, Boone, Iowa.

**SHAFTING Material (Tubular.)**  
National Tube Co., Pittsburgh, Pa.

**SHARPENING Stones.**  
Carborundum Co., Niagara Falls, N. Y.

**SHEET Steel and Iron.**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, O.

—Metal Working Machinery.  
Bertsch & Co., Cambridge City, Ind.

**SHEETS (Asbestos.)**  
Ruberoid Co., New York City.

—(Galvanized and Black.)  
American Rolling Mill Co., Middletown, O.  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

**SHINGLES (Asbestos.)**  
Ruberoid Co., New York City.

**SHIPBUILDING.**  
Charleston Dry Dock & Machine Co., Charleston, S. C.

**SHOVELS (Steam, Gas and Electric Power.)**  
Austin-Western Road Machinery Co., Chicago, Ill.

Bucyrus-Erie Co., So. Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**SILICATE OF SODA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SITES (Manufacturing.)**  
Associated Gas & Elec. System, New York, N. Y.

Crisp County Power Co., Cordele, Ga.  
Galveston, Texas, City of.  
Industrial Commission, Winston-Salem, N. C.

Missouri Pacific R. R., St. Louis, Mo.  
Model Land Company (Flagler System), St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.

**INGALLS** SERVICE-WORKMANSHIP. BIRMINGHAM, ALA. U.S.A.

# STRUCTURAL STEEL



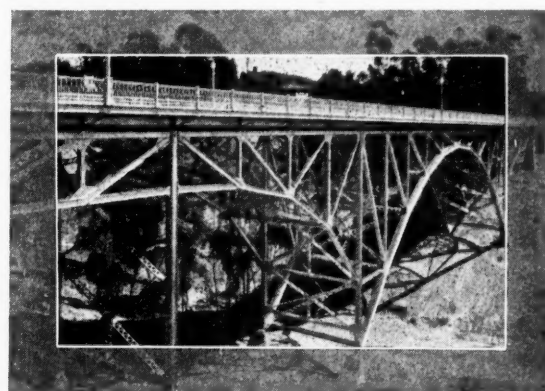
Ingalls steel being erected for the new Tuberculosis Hospital at Cleveland, Ohio. Crowell & Little of Cleveland, contractors.

Send us inquiries for all kinds of structural steel, standard buildings, bridges, steel shapes and similar work.

**The Ingalls Iron Works Company**

Main Office and Plants: Birmingham, Ala.  
 Eastern Plant: Verona, Pa. (in Pittsburgh Dist.)  
 Branch Sales Offices: New York, New Orleans, Tampa.

.... **STANDARD** ....  
**STEEL BUILDINGS**



## Bridge of Skies

The City of San Diego in its new First Street Bridge, combined the known dependability of Steel with a pleasing design and architectural treatment.

Allen and Rowe were Engineers; Lynch-Cannon Engineering Company, General Contractors; and we furnished the steelwork.

**VIRGINIA BRIDGE & IRON CO.**  
 Roanoke, Birmingham, Memphis, Atlanta, New Orleans, New York, Los Angeles, Charlotte, Dallas, El Paso.

**STEEL STRUCTURES**

## VIRGINIA BRIDGE

**ROANOKE IRON & BRIDGE WORKS, Inc.**  
**Structural and Ornamental Iron**  
**Wrought Steel Fences**  
**Steel Bridges**  
**Jail Cells**

Write for Estimates **ROANOKE, VA.**

**DIETRICH BROTHERS**  
**Structural and Ornamental Iron and Steel Works**  
 Large Stock of Standard and Bethlehem Shapes  
**CONCRETE REINFORCEMENTS**  
**BALTIMORE, MD.**

**GUNITE METHOD**  
 Specialists in  
**CEMENT GUN CONSTRUCTION**  
 Contracts Executed Anywhere  
**GUNITE CONCRETE AND CONSTRUCTION CO.**  
 BARCLAY A. GREENE, President  
 1301 Woodswether Road, Kansas City, Mo.  
 BRANCH OFFICES: St. Louis, Mo.; Chicago, Ill.; Birmingham, Ala.;  
 Dallas, Tex.; New Orleans, La.; Atlanta, Ga.

**Snead Architectural Iron Works**  
**STRUCTURAL STEEL**  
**ORNAMENTAL IRON**  
**LOUISVILLE, KY.**

**AUSTIN BROTHERS BRIDGE CO.**  
**Structural Steel and Ornamental Iron**  
**Bridges, Reinforcing and Guard Fence**  
**ATLANTA, GEORGIA**  
 Oakland City Station

**AMERICAN BRIDGE COMPANY**  
 Subsidiary of United States Steel Corporation

**FABRICATED STEEL STRUCTURES**  
**BRIDGES—BUILDINGS**  
**BARGES—TURNABLES—FURNACES—TOWERS**

General Office: Pittsburgh, Pa. — Offices in The Larger Cities  
 PACIFIC COAST DISTRIBUTOR: COLUMBIA STEEL CO., SAN FRANCISCO  
 EXPORT DISTRIBUTOR: U. S. STEEL PRODUCTS CO., NEW YORK

**BELMONT IRON WORKS**  
 PHILADELPHIA NEW YORK EDDYSTONE  
 Southern Sales Offices, Charlotte, N. C.  
 Engineers Contractors Exporters  
**Structural Steel**  
 Shop and Field Welded Steel Buildings



Seaboard Public Service Co., Alexandria, Va.  
Texas Power & Light Co., Dallas, Texas.

**SLAG, For Concrete.**  
Woodstock Slag Corp., Birmingham, Ala.  
—(Furnace.)  
Woodstock Slag Corp., Birmingham, Ala.

**SLINGS (Wire Rope.)**  
American Steel & Wire Co., Chicago, Ill.  
Roebling's Sons Co., John A., Trenton, N. J.

**SLUICE GATES AND APPLIANCES.**  
Smith Co., S. Morgan, York, Pa.

**SPEED REDUCERS.**  
Earle Gear & Mach. Co., Phila., Pa.

**SPIKES (Railroad, Ship.)**  
Bethlehem Steel Co., Bethlehem, Pa.  
Sweet's Steel Co., Williamsport, Pa.

**SPRINGS (Machinery, Railway, Spiral Steel.)**  
American Steel & Wire Co., Balto., Md.  
—(Wire—All Kinds.)  
American Steel & Wire Co., Balto., Md.

**SPRINKLERS (Automatic Fire.)**  
Moore Pipe & Sprinkler Co., Jacksonville, Fla.

**STACKS (Iron and Steel.)**  
Birmingham Boiler and Engineering Co., Birmingham, Ala.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Hedges Walsh Weldner Co., Chattanooga.  
Ingalls Iron Works Co., Birmingham, Ala.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
U. S. Pipe & Foundry Co., Burlington, N. J.  
Virginia Bridge & Iron Co., Roanoke, Va.

**STAINS (Shingle, Woodwork.)**  
Cabot, Inc., Samuel, Boston, Mass.

**STAIR TREADS.**  
Central Iron & Steel Co., Harrisburg, Pa.

**STANDPIPES.**  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STATIONERS (Envelopes, Letter and Billheads, etc.)**  
Smith & Son Co., Oscar T., Balto., Md.  
Young & Seiden Co., Baltimore, Md.

**STEAM (Specialties.)**  
Lunkenheimer Co., The, Cincinnati, O.  
Mueller Co., Decatur, Ill.

**STEEL.**  
American Rolling Mill Co., Middletown, O.  
Bethlehem Steel Co., Bethlehem, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—(Cold Rolled.)  
American Steel & Wire Co., Balto., Md.  
—(Fabricators.)  
United Welding Co., Middletown, O.  
—(Tool, High Speed.)  
Bethlehem Steel Co., Bethlehem, Pa.

**STEEL Buildings (Designers and Builders.)**  
American Bridge Co., Pittsburgh, Pa.  
Belmont Iron Works, Philadelphia, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—Plate Construction (Riveted or Welded.)  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Birmingham Tank Co., Birmingham.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Hedges Walsh Weldner Co., Chattanooga.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
United Welding Co., Middletown, O.

**STOKERS (Mechanical.)**  
Alabama Stoker & Boiler Co., Birmingham, Ala.

Babcock & Wilcox Co., The, New York.  
Detroit Stoker Company, Detroit, Mich.

**STORAGE.**  
General Warehouse & Storage Co., Atlanta, Ga.

**STRUCTURAL STEEL AND IRON.**  
American Bridge Co., Pittsburgh, Pa.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carnegie Steel Co., Pittsburgh, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Dietrich Brothers, Baltimore, Md.  
Ingalls Iron Works Co., Birmingham, Ala.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Snead Architectural Iron Works, Louisville, Ky.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

**SULPHATE OF ALUMINA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SULPHIDE OF SODA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SULPHURIC ACID.**  
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

**SUPER-HEATERS (Steam.)**  
Babcock & Wilcox Co., The, New York.

**SURFACING (Roads and Streets)**  
Culbert & Sons, W. F., Marion, Va.  
Koppers Products Co., Pittsburgh, Pa.

**SURVEYS (Industrial.)**  
Technical Service Co., New York, N. Y.  
—(Quantity.)  
Spring, Charles Herbert, Greensboro, N. C.

**SURVEYING INSTRUMENTS.**  
Weber Co., Inc., F., Philadelphia, Pa.

**SWINGING ENGINES.**  
Dake Engine Co., Grand Haven, Mich.

**SWITCHBOARDS, SWITCHES, ETC.**  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**SYSTEMS (Business.)**  
Ernst & Ernst, New York, N. Y.

**TANKS (Air Compressor.)**  
Titusville Iron Works Co., Titusville, Pa.  
—(Elevated Steel.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Cole Mfg. Co., R. D., Newman, Ga.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—(Elevated Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Davis & Son, G. M., Palatka, Fla.

**—(Iron and Steel.)**  
American Bridge Co., Pittsburgh, Pa.  
Birmingham Tank Co., Birmingham, Ala.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Cole Mfg. Co., R. D., Newman, Ga.  
Finnigan Co., Inc., J. J., Atlanta, Ga.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Westinghouse Traction Brake Co., Wilmerding, Pa.

**—(Seamless Steel.)**  
National Tube Co., Pittsburgh, Pa.  
—(Storage, Oil, etc.)  
Biggs Boiler Works, Akron, Ohio.  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Ingalls Iron Works Co., Birmingham, Ala.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Titusville Iron Works Co., Titusville, Pa.  
United Welding Co., Middletown, O.  
—(Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Davis & Son, G. M., Palatka, Fla.  
Virginia Mch. & Well Co., Richmond, Va.

**TARPAULINS.**  
Atlanta Tent & Awning Co., East Point, Ga.  
Fulton Bag & Cotton Mills, Atlanta, Ga.

**TAX SPECIALISTS.**  
Ernst & Ernst, New York, N. Y.

**TELEPHONE SERVICE.**  
American Telephone & Telegraph Co.

**TENTS.**  
Fulton Bag & Cotton Mills, Atlanta, Ga.

**TEXTILE CHEMICALS.**  
Grasselli Chemical Co., Inc., Birmingham.

**TILE. (Floor.)**  
Hood Co., B. Mifflin, Dalay, Tenn.  
—(Roof.)  
Hood Co., B. Mifflin, Dalay, Tenn.  
—(Sewer.)  
Lee Clay Products Co., Clearfield, Ky.

**TIN AND TERNE PLATES.**  
American Sheet & Tin Plate Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**TOOLS AND DIES.**  
Gerding Bros., Cincinnati, O.

**TOWERS (Electric Transmission.)**  
American Bridge Co., Pittsburgh, Pa.  
Bessemer Galvanizing Works, Bessemer, Ala.

**—(Radio.)**  
Bessemer Galvanizing Works, Bessemer, Ala.  
—(Steel and Wood.)  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Cole Mfg. Co., R. D., Newman, Ga.

**TRACK (Portable or Permanent.)**  
Equipment Corp. of America, Chicago, Ill.  
Sweet's Steel Co., Williamsport, Pa.

**TRACTORS (Industrial.)**  
Caterpillar Tractor Co., Peoria, Ill.  
International Harvester Co. of America, Inc., Chicago, Ill.  
—(Road.)  
Caterpillar Tractor Co., Peoria, Ill.

**TRAILERS (Arch-Gilder, Heavy Duty.)**  
Wellman Engr. Co., Cleveland, O.  
—Motor Truck.  
Steel Products Co., Savannah, Ga.

**TRAMRAIL SYSTEMS (Hand or Electric.)**  
Cleveland Crane & Engr. Co., Wickliffe, O.

**TRAMWAYS (Aerial Wire Rope.)**  
American Steel & Wire Co., Balto., Md.

**TRANSFORMERS.**  
General Electric Co., Schenectady, N. Y.  
—(Used.)  
Electric Service Co., Cincinnati, O.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**TRANSMISSION TOWERS**  
(Galvanized.)  
McClintic-Marshall Corp., Bethlehem, Pa.

**TRENCH MACHINERY. See**  
**Excavators (Trench.)**

**TRI-SODIUM PHOSPHATE.**  
Grasselli Chemical Co., Inc., Birmingham.

**TRUCKS (Motor.)**  
International Harvester Co. of America, Inc., Chicago, Ill.

**TUBES (Boiler.) See**  
**Boiler Tubes.**

**TUBING (Seamless Steel.)**  
National Tube Co., Pittsburgh, Pa.

**TURBINES (Hydraulic.)**  
Smith Co., S. Morgan, York, Pa.  
—(Steam.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
DeLaval Steam Turbine Co., Trenton, N. J.  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**TURNABLES.**  
American Bridge Co., Pittsburgh, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

**UNIONS.**  
Dart Mfg. Co., E. M., Providence, R. I.

**VALVES.**  
La Bour Co., Elkhart, Ind.  
Ludlow Valve Mfg. Co., The, Troy, N. Y.  
Lunkenheimer Co., The, Cincinnati, O.  
Mueller Co., Decatur, Ill.  
Westinghouse Traction Brake Co., Wilmerding, Pa.

**—(Acid Proof.)**  
Lunkenheimer Co., The, Cincinnati, Ohio.

**—(Corrosive Liquids.)**  
La Bour Co., Elkhart, Ind.

**—(Gate.)**  
Ludlow Valve Mfg. Co., The, Troy, N. Y.

**—(Non-Corrosive Liquids.)**  
La Bour Co., Elkhart, Ind.

**VAULTS (Bank and Safe Deposit.)**  
York Safe & Lock Co., York, Penna.

**WAGONS (Crawlers.)**  
Austin-Western Road Machinery Co., Chicago, Ill.

**WARDROBES (Hygienic, School.)**  
Wilson Corp., The J. G., New York.

**WAREHOUSING.**  
General Warehouse & Storage Co., Atlanta, Ga.

**WATER HEATERS.**  
Finnigan Co., Inc., J. J., Atlanta, Ga.

**WATER Purification.**  
Bacharach & Co., E. W., Kansas City, Mo.  
International Filter Co., Chicago, Ill.  
Roberts Filter Mfg. Co., Darby (Pa.)

**—Softening Apparatus (Purifying.)**  
American Water Softener Co., Phila., Pa.  
International Filter Co., Chicago, Ill.  
—Works Supplies and Appliances.  
Cast Iron Pipe Research Assn., Chicago, Ill.  
Glanorgan Pipe & Fdry. Co., Lynchburg, Va.  
Layne & Bowler, Inc., Memphis, Tenn.  
Leadite Co., Philadelphia, Pa.  
Mueller Co., Decatur, Ill.  
U. S. Pipe & Foundry Co., Burlington, N. J.

**WELDING.**  
Charleston Dry Dock & Machine Co., Charleston, S. C.  
Hedges-Walsh-Weldner Co., Chattanooga.  
United Welding Co., Middletown, O.

**WELDING APPARATUS (Electric Arc.)**  
General Electric Co., Schenectady, N. Y.  
Layne & Bowler, Inc., Memphis, Tenn.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**WELL CONTRACTORS (Oil, Artesian, etc.)**  
Layne & Bowler, Memphis, Tenn.  
Virginia Mch. & Well Co., Richmond, Va.

**WHEELS AND AXLES.**  
Carnegie Steel Co., Pittsburgh, Pa.

**WINDOW WASHING EQUIPMENT (Tramrail.)**  
Cleveland Crane & Engr. Co., Wickliffe, O.

**WIRE (All Kinds.)**  
American Steel & Wire Co., Chicago.  
Seneca Wire & Mfg. Co., Fostoria, O.  
—(Barbed Wire, etc.)  
American Steel & Wire Co., Balto., Md.  
Gulf States Steel Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**—(Fence.)**  
Cyclone Fence Co., Waukegan, Ill.  
Stewart Iron Works Co., Cincinnati, O.

**—(Flat and Round.)**  
American Steel & Wire Co., Balto., Md.  
Roebling's Sons Co., John A., Trenton, N. J.

**—(Galvanized and Annealed.)**  
Atlantic Steel Co., Atlanta, Ga.  
Gulf States Steel Co., Birmingham, Ala.

**WIRE Cloth (Iron, Steel, Copper, Brass, etc.)**  
Harrington & King Perf. Co., Chicago.  
Roebling's Sons Co., John A., Trenton, N. J.  
Seneca Wire & Mfg. Co., Fostoria, O.

**—Goods.**  
Cyclone Fence Co., Waukegan, Ill.

**—Rope (Transmission, Hoisting, Haulage.)**  
American Cable Co., New York City.  
American Steel & Wire Co., Chicago, Ill.  
Hazard Wire Rope Co., Wilkes-Barre, Pa.  
Roebling's Sons Co., John A., Trenton, N. J.

**—Rope Clips.**  
American Steel & Wire Co., Balto., Md.

**—Stapling.**  
Seneca Wire & Mfg. Co., Fostoria, O.

**—(Telephone and Telegraph.)**  
American Steel & Wire Co., Balto., Md.

**—(Welding.)**  
American Steel & Wire Co., Chicago, Ill.  
Roebling's Sons Co., John A., Trenton, N. J.  
Seneca Wire & Mfg. Co., Fostoria, O.

**WOOD PRESERVATIVES.**  
Century Wood Preserving Co., Boston.

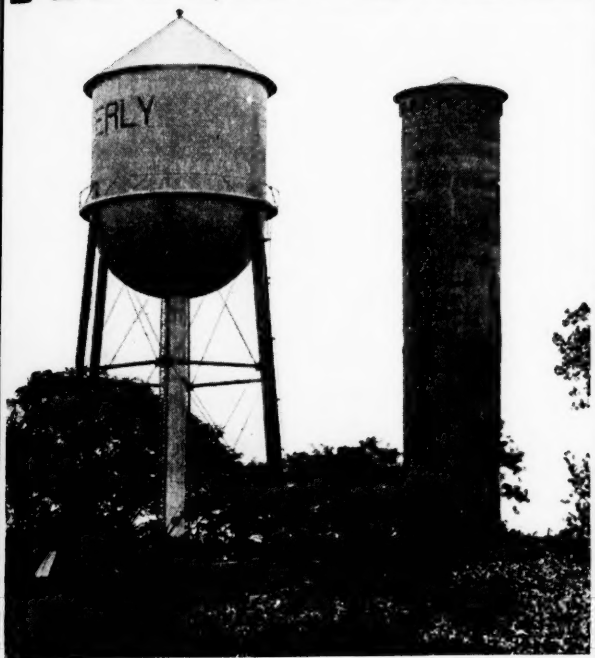
**WOOD TURNING (Columns, etc.)**  
Schwerdt Mfg. Co., A. F., Pittsburgh.

**WOODWORK (Cabinet.)**  
Mitchell Mfg. Co., Robert, Cincinnati, O.

**ZINC CHLORIDE.**  
Grasselli Chemical Co., Birmingham, Ala.

**ZINC METAL ARSENITE (Wood Preservative.)**  
Gulf States Creos. Co., Hattiesburg, Miss.

# PITTSBURGH-DES MOINES



## Improved Water Storage for Waverly, Ohio

Here is a 200,000 gallon hemispherical elevated tank erected in 1931 by "Pittsburgh-Des Moines" to supplant the concrete standpipe shown at the right. The inset below shows a deteriorated section at the base of this old concrete structure.

The new steel tank has a diameter of 32 feet, a depth of water 36 feet 1 inch, and stands 45 feet 9 inches from the ground to the tank bottom. It is supported on 6 modern steel columns designed in a sturdy tower of two panels.

Steel is the modern tested building material. Properly painted steel will last indefinitely. Steel does not rot, burn, warp, crumble or deteriorate with age and the weather. Steel is permanent—strong—attractive.



"Modern Water Storage", a new 28 page catalog, will tell you more about safe and economical water storage.

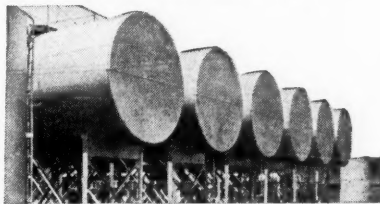
Write to our nearest office for your copy.

## Pittsburgh - Des Moines Steel Company

3420 Neville Island, Pittsburgh, Pa.  
326 Palmer Building, Atlanta, Ga.

Des Moines Chicago      Seattle San Francisco      New York Dallas

## SOUTHLAND PRODUCTS



STAND  
PIPES  
SMOKE  
STACKS  
TOWERS  
AND  
TANKS  
STEEL  
RIVETED  
PIPE

CHATTANOOGA BOILER & TANK CO.  
Chattanooga, Tenn.

## DAVIS CYPRESS TANKS

FACTORY TANKS AND STEEL TOWERS

If you handle liquids, for storage or processing, Davis Cypress Tanks very likely will provide new economies. For water, common chemicals, or for mixing and storing solids and compounds. Industrial plants and railroads have used our tanks for 42 years. Ask for estimates and catalog—both sent promptly on inquiry.



G. M. DAVIS & SON

P. O. Box 5, Palatka, Florida



## ELEVATED STEEL TANKS STORAGE TANKS AND STEEL PLATE WORK

Ask our nearest office for quotations

CHICAGO BRIDGE & IRON WORKS

Birmingham ..... 1530 Fifth St. N.  
Dallas ..... 1208 Burt Bldg.  
Also Chicago, New York, Cleveland, Tulsa, Houston,  
Detroit, Philadelphia, Boston, San Francisco, Seattle,  
Los Angeles, Havana



## 1854 COLE 1932

Manufacturers of

Towers and Tanks	Engines Boilers	Stand Pipes Castings Bins	Stacks and Plate Work
------------------------	--------------------	---------------------------------	-----------------------------

R. D. Cole Manufacturing Co.      Newnan, Ga.  
5 Beckman St., New York City



## IRON PIPE RAILINGS

When in the market for Pipe Railing for Stairs, Bridges or Retaining Walls, send us your drawings. We can quote you prices that will be worth considering.

PIPE RAILING CONSTRUCTION CO., Long Island City, New York

## TITUSVILLE

THE  
TITUSVILLE  
IRON WORKS CO.  
TITUSVILLE, PENNA.

## POWER AND HEATING BOILERS

FOR ALL  
INDUSTRIAL REQUIREMENTS



# Index of Advertisements

## A

Albert & Davidson Pipe Corp. 51  
 Albert Pipe Supply Co. 51  
 Allis-Chalmers Mfg. Co. 43  
 Alpaugh & Sons, Chas. W. 6  
 American Bridge Co. 59  
 American Limestone Co. 52  
 American Steel & Wire Co. 2  
 American Telephone & Telegraph Co. 8  
 American Water Softener Co. 45  
 Andrews Co., A. H. 47  
 Arundel Corporation 52  
 Atlantic Gulf & Pacific Co. 52  
 Austin Bros. Bridge Co. 59

## B

Bacharach & Co., E. W. 45  
 Baltimore Commercial Bank 47  
 Bannon Pipe Co. 57  
 Barstow & Co., W. S. 7  
 Bay City Shovels, Inc. 53  
 Belmont Iron Works 59  
 Bessemer Galv. Co. 43  
 Bethlehem Steel Co. 10  
 Blair, Algernon 6  
 Boxley & Co., W. W. 52  
 Burkes, J. V. & R. T. 6  
 Byllesby Engineering & Management Corp. 6

## C

Cabot, Inc., Samuel 57  
 Caldwell Co., W. E. 10  
 Carborundum Co. 64  
 Cattie & Bros., Joseph P. 43  
 Central Pipe & Supply Co. 51  
 Chase, William J. J. 6  
 Chattanooga Boiler & Tank Co. 61  
 Chicago Bridge & Iron Works 61  
 Cincinnati Steel Casting Co. 43  
 Classified Opportunities 50  
 Cole Mfg. Co., R. D. 61  
 Consoer, Older & Quinlan, Inc. 6  
 Converse & Co., J. B. 6  
 Cornell-Young Co. 6  
 Cowper Co., The John W. 6  
 Crucible Steel Casting Co. 43  
 Culbert & Son, W. F. 52  
 Cutler Mail Chute Co. 10  
 Cyclone Fence Co. 57

## D

Dart Mfg. Co., E. M. 10  
 Davis & Son, G. M. 61  
 Delaware Registration Trust Co. 47

## E

Earle Gear & Machine Co. 43  
 Electric Bond & Share Co. 47  
 Electric Service Co. 51  
 Engineering Service Corp. 6  
 Equipment Corp. of America 51  
 Erdle Perforating Co. 7

## F

Finnigan Co., Inc., J. J. 45  
 Fiske-Carter Construction Co. 6  
 Friend & Co. 52  
 Froehling & Robertson 7  
 Fulton Bag & Cotton Mills 52

## G

Gardner & Howe 6  
 General Contracting Corp. 51  
 General Machine Works 43  
 Georgia Iron Works 53  
 Georgia Marble Co. 26-27-28; 57  
 Gerding Brothers 10  
 Glamorgan Pipe & Fdy. Co. 52  
 Goder, Joseph 6  
 Greenpoint Iron & Pipe Co. 51  
 Gulf Refining Co. 44  
 Gulf States Creosot'g Co. 10  
 Gunite Concrete & Constr. Co. 59  
 Guyan Machine Shops 51

## H

Hardaway Contracting Co. 6  
 Harrub Engr. Co., C. N. 6  
 Hedges Walsh Weidner Co. 45  
 Hornbuckle Contracting Co. 6  
 Huey, S. E. 6  
 Hunt Co., Robert W. 6

## I

Ingalls Iron Works Co. 59  
 International Filter Co. 45

## K

Kennedy-Riegger Drilling Co. 7

## L

Law & Co., A. M. 47  
 Leadite Co. 10

## S

Lee Engineering Corp., W. S. 6  
 Lockwood Greene Engrs., Inc. 7  
 Salem Foundry & Mch. Works 43  
 Saxe, Van Rensselaer P. 6  
 Schofield's Sons Co., J. S. 45  
 Shore Line Builders, Inc. 6  
 Sirrine & Co., J. E. 6  
 Smallman-MacQueen Const. Co. 6

## M

Main, Inc., Chas. T. 6  
 Manhattan Perforated Metal Co. 7  
 Marine Metal & Supply Co. 51  
 McCrary Co., J. B. 7  
 McDowell Pipe Corp. 51  
 Milburn, Heister & Co. 6  
 Model Land Co. (Flagler System) 46  
 Mott Core Drilling Co. 7  
 Moyer Co., Tilghman 6  
 Mundt & Sons, Chas. 7  
 Myers & Bro. Co., F. E. 10

## N

Nat'l Paving Brick Assn. 43  
 North Carolina Granite Co. 57  
 Northwest Engineering Co. 3

## O

O'Brien Machinery Co. 51  
 Ohio Power Shovel Co. 53  
 Old Dominion Box Co. 47  
 Osborne, Earl N. 6  
 Owen Bucket Co. 53  
 Owensboro Sewer Pipe Co. 57

## P

Partridge, A. S. 51  
 Pennsylvania Drilling Co. 7  
 Picard Laboratories 6  
 Pipe Railing Construction Co. 61  
 Pittsburgh-Des Moines Steel Co. 61  
 Pittsburgh Piping & Equip. Co. 44  
 Poe Piping & Heating Co. 6  
 Preacher & Co., Inc., G. Lloyd 6  
 Proposal Advertisements 48-49

## Q

Quinn Wire & Iron Works 53

## R

Resale Department 51  
 Roanoke Iron & Bridge Wks. 59  
 Roberts Filter Mfg. Co. 45  
 Rust Engineering Co. 45

## T

Table of Contents 9  
 Titusville Iron Works Co. 61

## V

Virginia Bridge & Iron Co. 50

## W

Walker Electrical Co. 6  
 Warner Service Co. 6  
 Webb Electric Co. 6  
 Wellman Engineering Corp. 53  
 Westinghouse Traction Brake Co. 45  
 Whitaker Paper Co. 47  
 White Engineering Corp., J. G. 6  
 Wiedeman and Singleton, Inc. 6  
 Wiley & Wilson 7  
 Woodstock Slag Corp. 52

Classified Index 54-60

Classified Opportunities 50

Professional Directory Cards 61

Proposal Advertisements 48-49

Resale Department 51